MATHS MELA

Textbook of Mathematics for Grade 4

Part - II

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0433

विद्यया ऽमृतमश्नुते

एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

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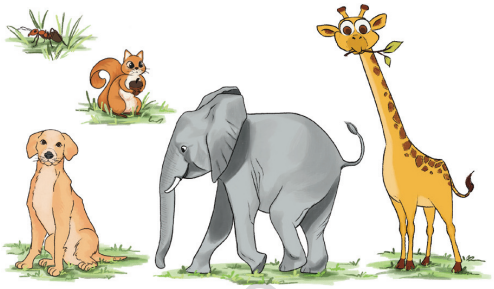
Chapter 8

Weigh It, Pour It

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In Grade 3, we learnt about measuring weight and capacity. Do you remember the 1 kilogram salt packet and 1 litre bottle? Let us learn some more about measuring weight and capacity.



1. Look at the pictures given and write the names of the animals from heaviest to lightest.

   _____



2. Write the name of the heaviest object in your home. How did you know?

   _____

3. Do you carry your school bag with ease or with some effort?

   _____

4. Write the name of the heaviest book in your bag. How did you know?

   _____

5. What is your weight? How did you know?

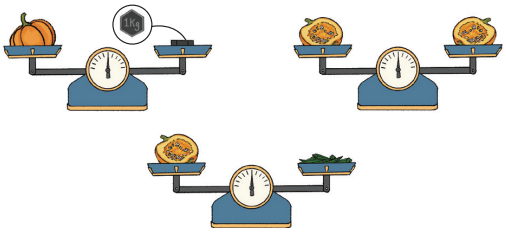
   _____

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Fun at Vegetable Market!

Rita and Shabnam went to the market to buy some fruits and vegetables. They saw the vegetable seller weighing vegetables.





What do you think will be the weight of the half pumpkin? _____

Let Us Do

Estimate the weight of the following and put a tick mark (✓) in the appropriate cell. Try to verify if your guess is correct by using a weighing balance.

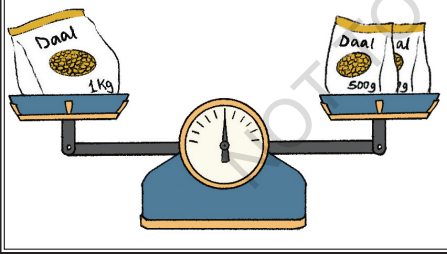
Fruits and vegetables	Estimation		Actual weight	
	Less than 1 kg	More than 1 kg	Less than 1 kg	More than 1 kg
6 Bananas				
5 Potatoes				
10 Tomatoes				
15 Onions				

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Let Us Explore

We often write kg for kilogram and g for gram

a. Look at the picture. You may also try doing the same.



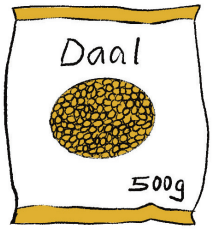
2 packets of 500 grams = 1000 g = 1 kg

So, 1 packet of 500 g = $\frac{1}{2}$ kg

Or 500 g = $\frac{1}{2}$ kg

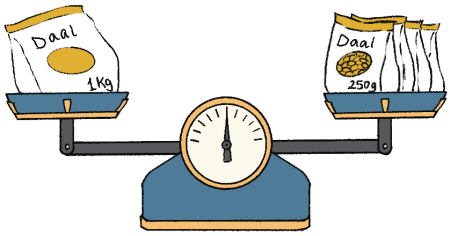






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b. Look at the picture. You may also try doing the same.



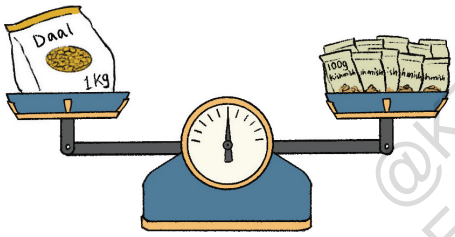
4 packets of 250 grams = 1000 g = 1 kg

So, 1 packet of 250 g = $\frac{1}{4}$ kg

Or 250 g = $\frac{1}{4}$ kg



c. Look at the picture. You may also try doing the same.



10 packets of 100 grams

= 1000 g = 1 kg



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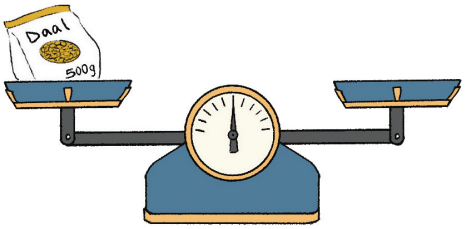
Let Us Find

1. How many 250 g daal packets will balance one 500 g daal packet?

Draw as many packets of 250 g on the empty pan such that it balances the 500 g packet shown on the left pan of the balance.

What did you find?

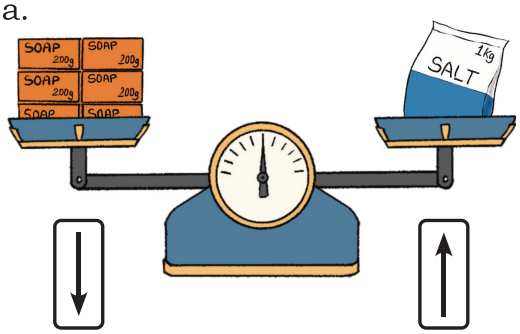
250 g = _____ of 500 g ($\frac{1}{2}$, 2)



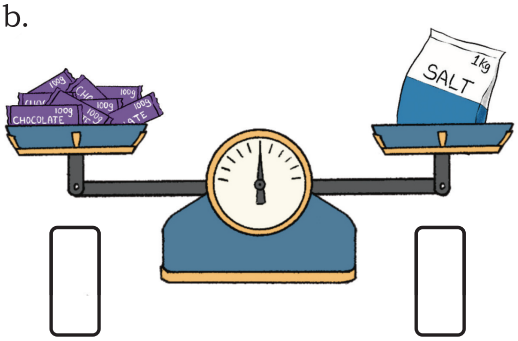
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2. Draw arrows to indicate which side the pan balance will tilt? One is shown for you.

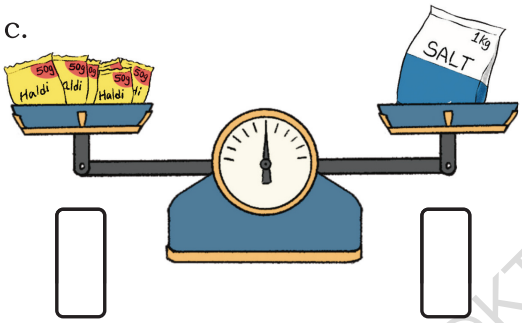
a.



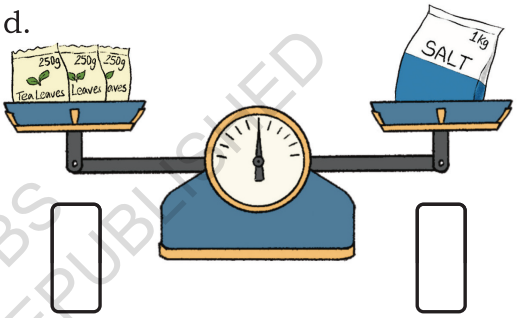
b.



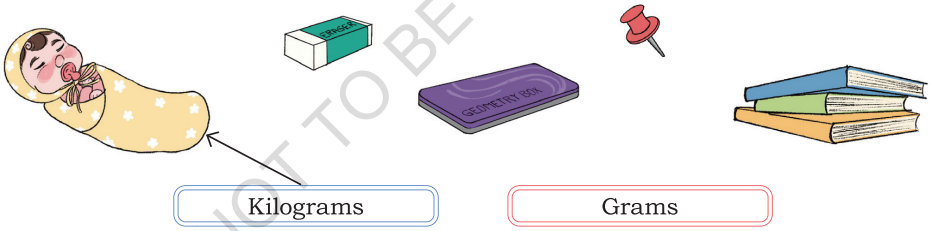
c.



d.

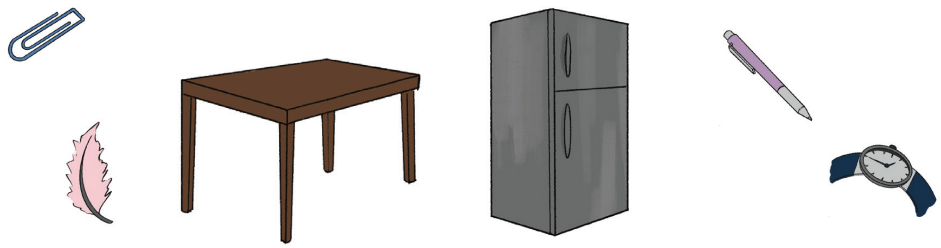


3. Match the unit convenient for measuring each of the following objects?



Kilograms

Grams

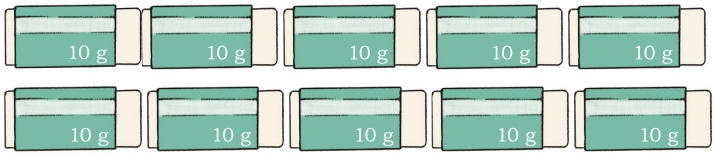


Note for Teachers: You could try to organise a weighing balance in grade and weights like 100 g, 500 g, 1 kg. You could also ask children to do this task at home or in their neighbourhoods.

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Let Us Do



1. How many erasers will weigh the same as a 50 g *Haldi* packet?_____
2. A 100 g soap bar will weigh the same as _____ erasers.
3. _____ erasers will weigh the same as 250 g sugar.

Let Us Think

Boxes of Sweet

Mr Shrinathan, a sweet shop owner has several orders for 1 kg *Kaju-katli* but he has to pack them in different sized boxes.



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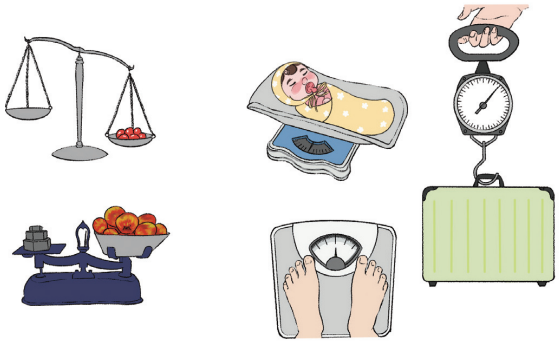
Write down the number of boxes needed to pack 1 kg *Kaju-katli* in the blank space:

1. Mr Das wants the sweets in boxes weighing 500 g each. _____
2. Mrs Fernandes wants the sweets in boxes weighing 250 g each. _____
3. Mrs Khan wants the sweets in boxes weighing 100 g each. _____
4. Mr Patel wants the sweets in boxes weighing 50 g each. _____

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Weighing Machines

Do you know the different types of weighing machines used to weigh different objects?



Let Us Do

Ask your parents and find the amount of consumption of the following items at your home in a month.

Items	Weight
Atta	
Rice	
Pulses	
Sugar	

Taran and his sister are lifting packets of flour, rice, and salt.



What do you think they are experiencing while lifting these packets?

Have you ever lifted such packets at your home? What do you experience? Discuss.

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Let Us Do

1. Try to lift some objects around you and write the names of three objects that you can lift easily. Estimate and write their weights.

   1. _____ 2. _____ 3. _____

2. Now write the names of things that you can lift with a lot of effort. Estimate and write their weights.

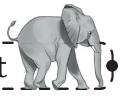
   1. _____ 2. _____ 3. _____

3. How many 1 kg packets are in

   a. 10 kg : _____ c. 50 kg : _____

   b. 20 kg : _____ d. 25 kg : _____

4. Match the objects in the left column with their estimated weights in the right column.

A cat 	1 g to 5 g
An elephant 	150 kg to 300 kg
A 1 litre filled bottle 	3 kg to 5 kg
A tiger 	10 g to 15 g
An empty gas cylinder 	6 kg to 10 kg
A pen 	More than 1000 kg
A leaf 	15 kg
A wooden chair 	800 g to 1000 g

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Do You Know?

Mirabai Chanu is an Indian weightlifter. She won the silver medal at the 2020 Tokyo Olympics in the Women's 49 kg event. She lifted a total of 202 kg.



Measuring Capacity



Do you remember the 1 litre bottle? How much water does your water bottle hold?

Find bottles and containers that can hold the following quantities of water. Write their names in the appropriate columns in the table given below.

Less than 1 litre	1 litre	More than 1 litre

Take help from your teachers and parents to collect different bottles with different capacities—500 *ml*, 250 *ml*, 100 *ml*, 50 *ml*, and 10 *ml*.

Try to fill a one litre bottle with the water contained in different smaller bottles.

We often write l for litre and ml for millilitre

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Let Us Find

a) How many 500 *ml* bottles will fill a 1 *l* bottle?





500 ml + 500 ml = 1 l

1000 ml = 1 l

$$500\ ml = \frac{1}{2}\ l$$

b) How many 250 *ml* bottles will fill a 1 *l* bottle?



250 ml + 250 ml + 250 ml + 250 ml = 1 l

1000 ml = 1 l

$$250\ ml = \frac{1}{4}\ l$$

c) How many 100 *ml* bottles will fill a 1 *l* bottle?



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d) How many

250 *ml* in $\frac{1}{2}$ *l* = _____ 250 *ml* in 750 *ml* = _____

100 *ml* in $\frac{1}{2}$ *l* = _____ 100 *ml* in 800 *ml* = _____

Let Us Do



1. Find a dosing cup or a bottle of 10 *ml* and try to find how many 10 *ml* will fill a 100 *ml* bottle _____

Find how many

a) 10 *ml* dosing cups will fill a 250 *ml* glass? _____

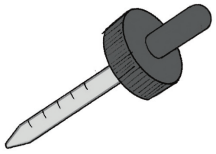
b) 10 *ml* dosing cups will fill a 500 *ml* vessel? _____

c) 10 *ml* dosing cups will fill a 1 *l* bottle? _____

2. Take a 1 *ml* dropper and find out

a) How many 1 *ml* droppers will fill a 10 *ml* dosing cup? _____

b) How many droppers will fill a teaspoon? _____



3. Find out how much of these liquids are used at a time.

a) Eye drops Less than 1 *ml* at a time.

b) Honey _____

c) Cough Syrup _____

d) Cooking Oil _____

e) _____ _____






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4. Mr Krishna packages perfumed oils in different sized bottles. During a festival, the following customers asked for 1 *l* perfumed oils but in different sized bottles. Write the number of bottles each of them will get.

   a) Ms Shetty wants bottles of 500 *ml* each _____

   b) Mr Muthukumar wants bottles of 200 *ml* each _____

   c) Ms Naini wants bottles of 100 *ml* each _____

   d) Ms Kannan wants bottles of 50 *ml* each _____

5. Estimate and verify by measuring. Use the bottles you have collected for this purpose (for example, 500 *ml*, 250 *ml*, 100 *ml*, 50 *ml*, and 10 *ml*).

Container	Estimate	Actual capacity
Water bottle		
Glass		
Mug		
Jug		
Bucket		
Teaspoon		
Bowl		



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Let Us Explore

Visit nearby shops and make a list of different items that are sold in the following quantities.



50 *ml*	100 *ml*	200 *ml*	250 *ml*	500 *ml*	900 *ml*

Let Us Find



a) How many litres of water do you drink in a day? How did you find out?

_____



b) How much water can a crow drink at a time?

_____

c) How much milk do you drink in one day?

_____

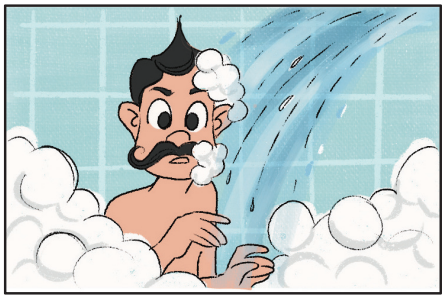


d) How much water does an elephant drink in a day?

_____

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What do you use the most water for? What do you use the least water for? Compare this with a few others in your grade . In which activities is your water usage the same?



How much water may be used in the following activities?

a. Water for taking a shower

b. Watering crops in a field

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c. Watering flowering plants

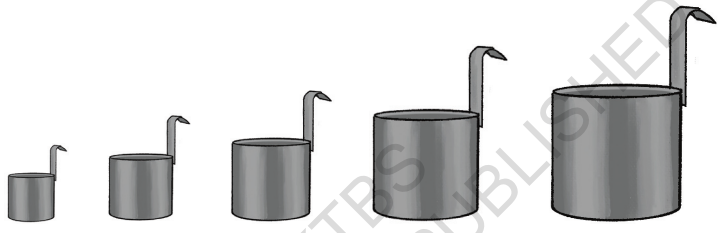
d. Washing clothes

e. _____

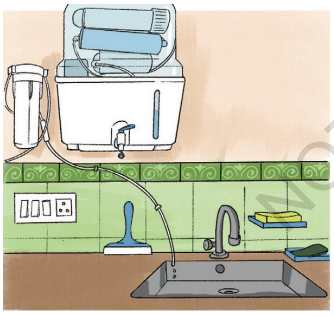
f. _____

Containers Used for Measuring Capacity

Have you seen these measuring cans for measuring milk?



Water Conservation in Everyday Life



Have you ever noticed a small drip of water flowing from your tap or water purifier? Have you considered how much water is actually being wasted?

Take a container and put it under the leaking tap or water purifier for an hour. How much water is lost in an hour from just a slow drip? Did it surprise you?

How much water is lost in a day?

How much do you think is lost in a week?

How would this wastage of water affect us?



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Chapter 9

Equal Groups

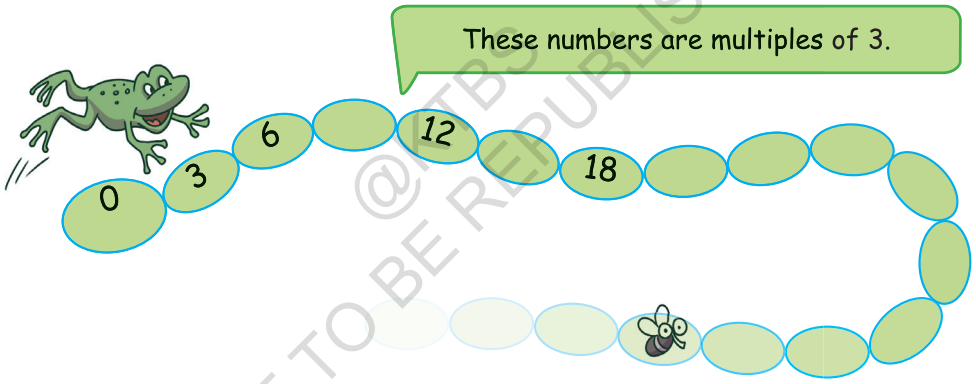
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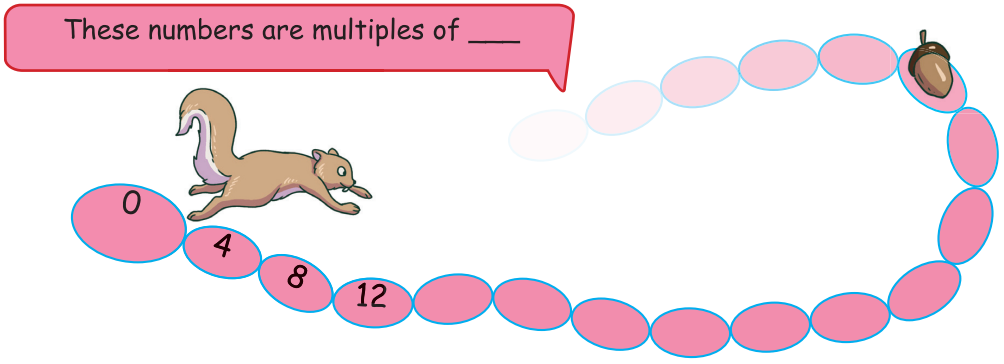
Animal Jumps

Fill in the blank spaces with the appropriate numbers. Find how many jumps the animal needs to take to reach its food.

1. The frog jumps 3 steps at time. Which numbers will the frog touch? Will it touch 67?

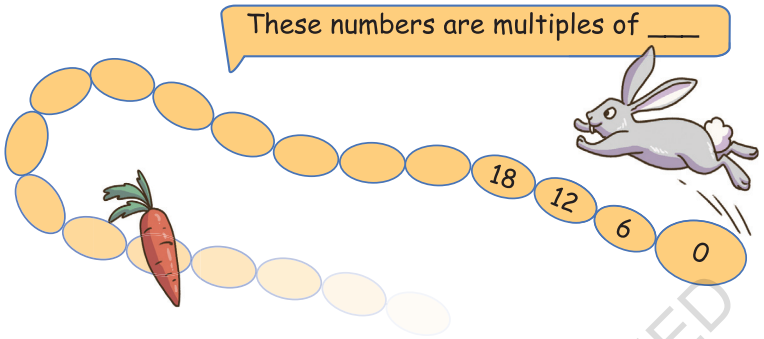


2. The squirrel jumps 4 steps at a time. Which numbers will the squirrel touch? How many times should the squirrel jump to reach 60?

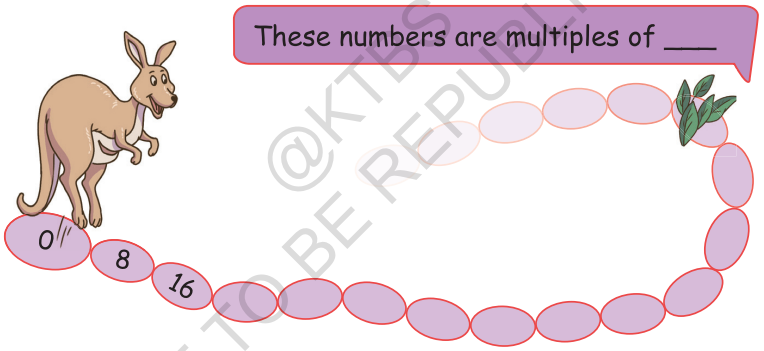


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3. The rabbit jumps 6 steps at a time.
Which numbers will the rabbit touch?
What is the smallest 3-digit number on which the rabbit will land?
How many times did the rabbit jump to reach this number?



4. The kangaroo jumps 8 steps at a time. Which numbers will the kangaroo touch?



Are there numbers that both the rabbit and the kangaroo will touch?

5. To reach 48, how many times did the rabbit jump? _____



How many times did the Kangaroo jump to reach the same number?

_____

What did you observe? Share your thoughts.

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6. To reach 60, how many times did the frog jump? _____
How many times did the rabbit jump to reach the same number? _____
What do you observe? Share your thoughts.

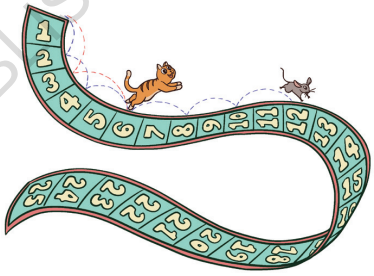
Common Multiples

1. Which numbers do both the frog and the squirrel touch? A few common multiples of 3 and 4 are _____.

2. Which numbers do both the rabbit and the kangaroo touch? A few common multiples of 6 and 8 are _____.

7. If the cat and the rat land on the same number, the cat will catch the rat.

The cat is now on 6 and the rat on 12. When the cat jumps 3 steps forward, the rat jumps 2 steps forward. Will the cat catch the rat? If yes, at which number?



8. Find multiplication and division sentences below. Shade the sentences. How many can you find?

Two examples are done for you.

3	4	2	7	4	9	8	2
4	2	10	20	5	2	2	4
12	8	0	6	4	8	8	1
3	2	6	2	2	6	16	2
2	3	6	18	6	5	3	1
10	3	4	1	12	2	7	14
2	0	2	2	6	10	7	2
20	5	8	2	2	5	10	2

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Gulabo's Garden

1. Gulabo's garden has lily flowers. Each lily flower has 3 petals. How many petals are there in 12 flowers? Show how you found your answer.



Gulabo will have 12 × 3 petals.

Petals in 10 lilies 10 × 3 petals = 30 petals

Petals in 2 lilies _____

Petals in 12 lilies _____

No. of groups (Multiplier)

12 × 3 = 36 *(Product)*

Group size (Multiplicand)

Multiplication statement



2. In a hibiscus flower there are 5 petals. Gulabo counted all the petals and found them to be 80. How many flowers did she have?

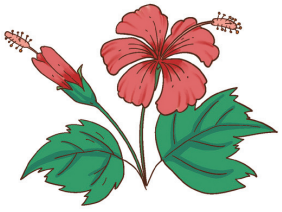
Gulabo has 80 ÷ 5 flowers.

5 petals is 1 flower.

10 petals are 2 flowers.

50 petals are 10 flowers.

Then, 80 petals are _____ flowers.



Note for Teachers: In this chapter, the focus is on multiplying 1-, 2-, and 3-digit numbers by 1-digit numbers, with group sizes less than 10. Children should be encouraged to break down the 'multiplier (no. of groups)' into multiples of 10 to simplify calculations. They can also use strategies like doubling and halving.

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3. Gulabo plants some marigold saplings in a box as shown in the picture.



There are _____ saplings in each row.

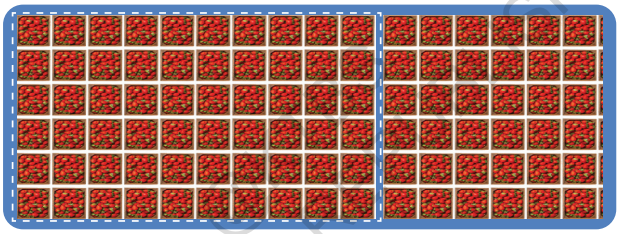
There are _____ rows.

How many saplings has she planted?

How did you calculate it?

Mathematical Statement _____

4. "Dailyfresh" supermarket has kept boxes of strawberries in a big tray.
How many boxes of strawberries does the supermarket have?
Show how you found them.



There are _____ columns of strawberry boxes.

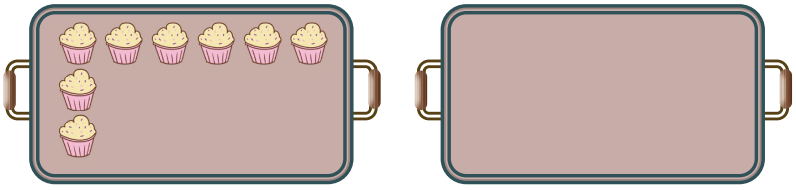
There are _____ boxes in each column.

There are _____ boxes in all.

Mathematical Statement _____

5. Radha runs a bakery shop. She bakes 18 cupcakes in one tray of the size shown below.

a) Complete arranging the cupcakes in the two trays given below.



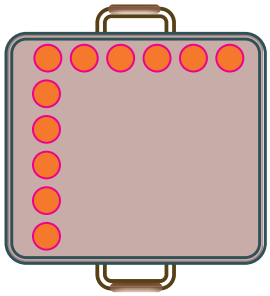
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b) She can use two such trays in her oven at a time. How many cupcakes can she make in one attempt? _____

c) Today she has received a special order. She has made 108 cupcakes. How many trays has she baked?

d) She has another square baking tray. She can bake 36 mini cupcakes in such a tray. Complete the arrangement below.



Number of columns: _____

Number of cupcakes in each column: _____

Multiplication statement _____

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Find different ways of arranging the following numbers of cupcakes in rows and columns in your notebook.
36, 8, 12, and 24

The Doubling Magic

Magician Anvi came one day,

To Gulabo's house, ready to play.

From her coat, with a grand display,

Note for Teachers: Encourage learners to identify different ways of finding the answers. Children can skip count, count in rows and columns and think in terms of equal groups. The idea is to make children notice arrays as a way of representing multiplication.

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She pulled out 23 flowers, bright and gay!



She smiled and said, "Now watch and see,
How many flowers will there be?"

How many flowers are there now? _____

What magic did Anvi do?

Flowers before magic	23	10	51	95	150	199	425	500			
Flowers after magic	46								222	410	500

a) Double of 32 =_____ b) Double of 14 =_____ c) Double of 26 =_____

d) Double of 17 =_____ e) Double of 39 =_____ f) Double of 45 =_____

1. Guess what will be the ones digit of the following numbers when doubled.
   Write the ones digit in the space provided.

   a) 28 _____ b) 56 _____ c) 45 _____ d) 17 _____

2. Give examples of numbers that when doubled give the following digits in the ones place.

   a) 0 _____ b) 2 _____ c) 4 _____

   d) 6 _____ e) 8 _____

Can we get 3, 5, 7, 9 as the ones digit after doubling?

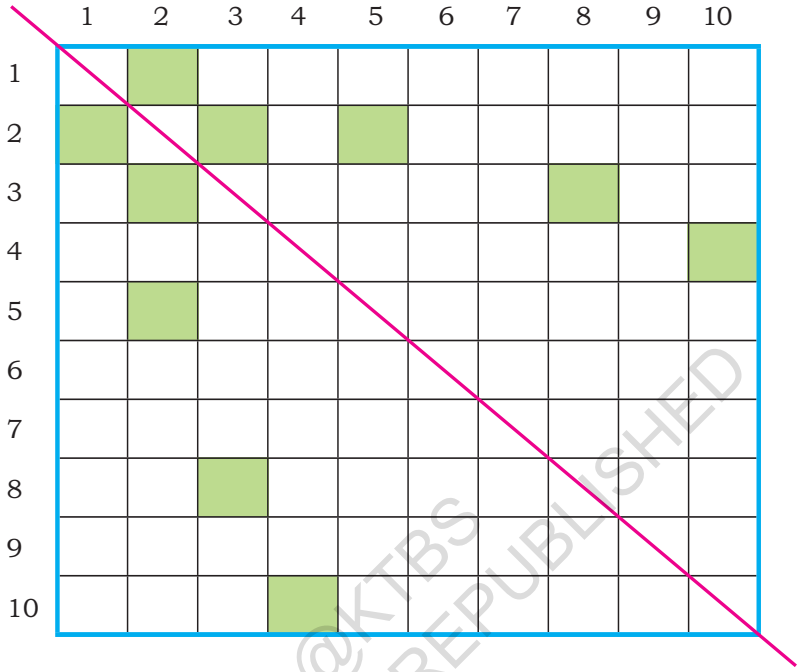
What do we notice about the numbers that we get after doubling? Even or Odd?

Note for Teachers: Encourage children to use Diene's blocks or a ganit mala to double or half, especially for big numbers. Doubling and halving are useful strategies to include when teaching multiplication and division. Teacher can systematically change the numbers to include different digits in the ones place.

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Fill each square in the chart by multiplying the row number by the column number.



What do you notice about the numbers shaded in green? Why is this happening?

1. Share the patterns that you notice in the table.
2. Are the numbers in row 7 the same as the numbers in column 7? In general, are the numbers in a given row the same as the numbers in the corresponding column? Why does this happen?
3. Is there a row where all answers (products) are even numbers? Which rows have this property?
4. Is there a row having only odd numbers as products?
5. Are there rows that have both even and odd numbers? What do you notice? Why is it so?
6. Are there more even numbers in the chart or odd numbers? How do you know?

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7. Colour the common multiples of the following numbers. Use different colours for each item.

a) 2 and 3 b) 4 and 8 c) 7 and 9

Share your observations regarding the numbers that are common multiples in each case.

8. Observe the pattern in the ones digits of the products in row 5?

Observe the ones digit of the products in other rows also. What patterns do you notice?

9. Here is row 8 of the chart: 8, 16, 24, 32, 40, 48, 56, 64, 72, 80
The ones digit of the products are: 8, 6, 4, 2, 0, 8, 6, 4, 2, 0

Do you see a repeating pattern here?

Guess the ones digit of the following products. Verify your answer by multiplying. Write the digit in the space given.

11 × 8 _____ 12 × 8 _____ 13 × 8 _____

10. In row 8 of the chart, there is no number whose ones digit is 1. What other digits do not appear as the ones digit?
11. Is there a row in which all the digits from 0 to 9 appear as the ones digit? Which rows have this property?
12. It can be seen in row 8 that 0 appears as the ones digit two times.

☐ × 8 gives 0 as the ones digit.

What numbers can go in the box? Give 5 examples of such numbers.

13. Is there a row in which 0 appears as the ones digit only once? Which rows have this property?
14. What do you notice about the answers for Questions 11 and 13? Share in the grade .

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Multiples of Tens

1. Let us count the number of wheels in tricycles.



Number of wheels in 10 tricycles with 3 wheels in each is 10 × 3 wheels = _____ wheels.

Number of wheels in 10 more tricycles with 3 wheels in each is 10 × 3 wheels = _____ wheels.

Number of wheels in 20 tricycles with 3 wheels in each is 20 × 3 wheels = _____ + _____ = _____ wheels.

10 × 3 = _____
20 × 3 = _____

2. Let us count the number of wheels in cars.



Number of wheels in 10 cars with 4 wheels in each is 10 × 4 wheels = _____ wheels.

Number of wheels in 30 cars with 4 wheels in each is 30 × 4 wheels = _____ + _____ + _____ = _____ wheels.

10 × 4 = _____
30 × 4 = _____

What happens when the number of groups is a multiple of 10?

Solve the following in a similar way. Share how you found the answers.

a) 10 × 6 = _____
b) 40 × 6 = _____

c) 10 × 8 = _____
d) 60 × 8 = _____

e) 6 × 8 = _____
f) 60 × 8 = _____

g) 4 × 6 = _____
h) 40 × 8 = _____

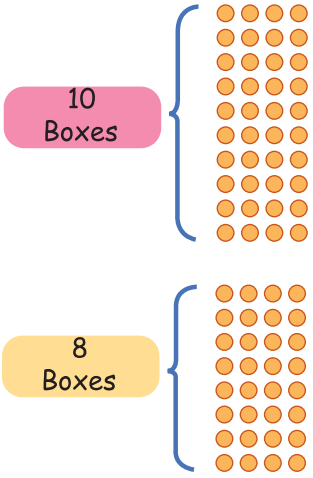
Note for Teachers: Encourage children to identify the relationship between products like above. Ten-times is a good way of articulating this relationship between products 6 × 8 and 60 × 8. Three-times could be a way of describing the relationship between 10 × 4 and 30 × 4.

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Multiplying Using 10s

1. Radha is packing cupcakes in boxes of 4. She has packed 18 boxes. How many cupcakes are there in the packed boxes?



18 boxes have 4 cupcakes in each.
So, there are 18 × 4 cupcakes.

10 boxes with 4 cupcakes in each contain
10 × 4 cupcakes = _____ cupcakes.

8 boxes with 4 cupcakes in each contain
8 × 4 cupcakes = _____ cupcakes.

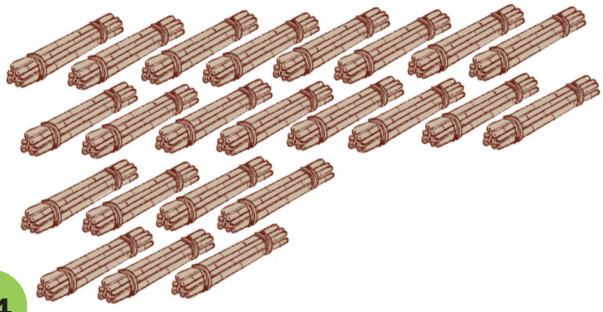
18 boxes with 4 cupcakes in each
contain ____ + ____ cupcakes
= _____ cupcakes.

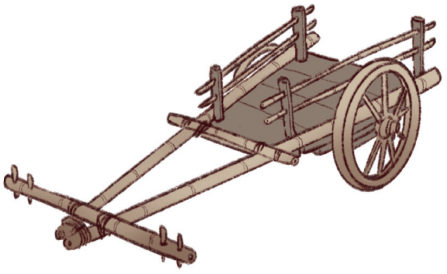


×	4
10	10 × 4 = 40
8	8 × 4 = 32
	72

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2. 8 bamboo rods are needed to make a bullock cart. How many bamboo rods are needed for 23 carts?





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One cart needs 8 bamboo rods. 23 carts need 23 × 8 rods.

20 carts with 8 rods in each need

20 × 8 rods = _____ rods.

3 carts with 8 rods in each need

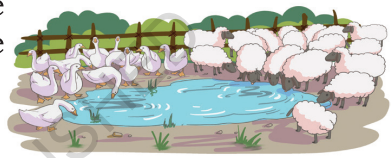
3 × 8 rods = _____ rods.

×	8
20	20 × 8 = 160
3	3 × 8 = 24
	184

Let Us Solve



1. A flock of 25 geese and 12 sheep have gathered around a pond. Chippi the lizard sees many legs.
   How many legs does it see?



2. In an auditorium, 8 children are sitting in each row. There are 15 such rows in the school auditorium. How many children are in the auditorium?

3. A book shop has kept 9 books in each pile. There are 14 such piles. How many books does the shop have?



4. Surya is making a patch work with beads of two colours as shown in the picture. How many beads has he used? How many each of golden colour beads and white colour beads has he used in making this patch work?

5. For each of the following multiplication problems, make your own stories as above. Then find out the product.

   a) 34 × 3 b) 75 × 5

   c) 46 × 6 d) 50 × 9

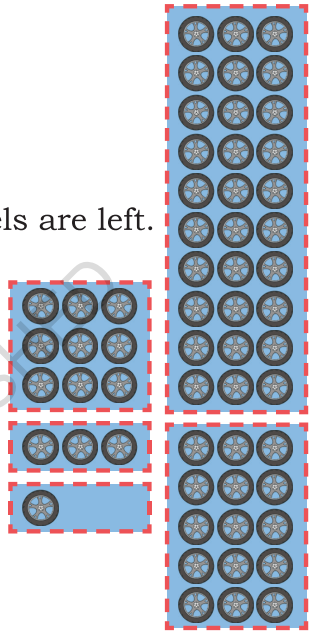
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Division

1. A factory has ordered 58 wheels for the small tempos that they make. Each tempo has 3 wheels.

In how many tempos can they fix the wheels?
Discuss your thinking in each step.



Number of tempos is 58 ÷ 3
30 wheels are needed for 10 tempos. _____wheels are left.

15 wheels are needed for _____ tempos.
_____wheels are left.

9 wheels are needed for_____ tempos.
_____ wheels are left.

_____ wheels are needed for_____ tempos.
_____ wheels are left.

Can we make another tempo?
How many total tempos can the factory make using the 58 wheels?
_____

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```
3) 58 ( 10+5+3+1
  -30
   28
  -15
    13
  - 9
     4
  - 3
     1
```

With 58 wheels, we can make 19 tempos.
1 wheel is left.

Note for Teachers: The division performed here is by partial quotient method. It is carried out by taking away groups of 10s, 5s or any other small multiples, which are easily available to children. Children can choose multiples of their own choice to solve the problems. Encourage them to gradually shift to taking away 10s and multiples of 10s.

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2. A dairy farm has many cows. Chippi the lizard is surprised to see 88 legs.
How many cows are there in the farm? Write appropriate sentences as above to show your thinking.



Number of legs of a cow: _____
Number of cows is 88 ÷ _____

Show your work using the table below.
Hint: Taking out groups of 10s is easy.

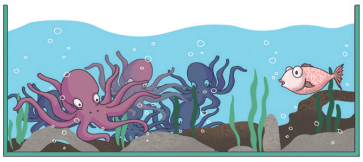
No. of legs	No. of cows	No. of legs remaining
40	10	88 48
_____	_____	_____
_____	_____	_____

4) 88 (10+
– 40
48
–

Total number of cows = _____

Let Us Solve

1. In a big aquarium, Jolly fish sees 72 legs of octopuses. How many octopuses are there in the aquarium?



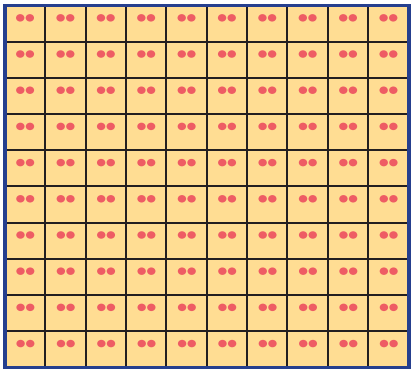
2. A sports store packs 4 shuttlecocks in a bigger box. They have 50 shuttlecocks. How many boxes will they need to pack all of them? Can they pack all the shuttlecocks in the boxes? How many are left?
3. Rakul Chachi uses a part of her farm to grow flowering plants for the upcoming festive season. She has planted 75 saplings of roses. Each row has 5 saplings. How many rows of saplings has she planted?
4. Make stories for the following problems and solve them:
   a) 70 ÷ 5
   b) 84 ÷ 7
   c) 69 ÷ 3
   d) 93 ÷ 6

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Multiples of 100

2 people on each bike

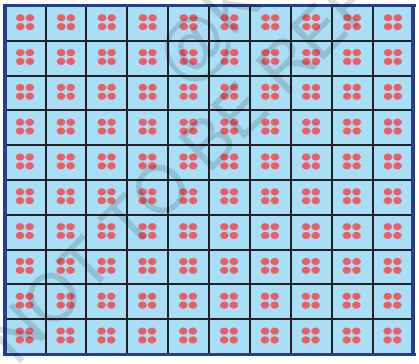


100 bikes with 2 people on each have
100 × 2 people = _____ people.

200 bikes with 2 people on each have
_____people.
How did you find it?

100 cars with 4 people in each have
100 × 4 people = _____ people.

500 cars with 4 people in each have
_____people.
How did you find it?



4 people in each car

500 × 4 = _____
100 × 4 = _____

5 × 4 = _____
50 × 4 = _____

What do you notice about multiplying by multiples of 100s?

Note for Teachers: Encourage children to work out the answers in different ways. Also help them notice the relationship between single digit multiplication and multiples of 100s of the same group size. Expressing the relationship as 'hundred-times' is appropriate.

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Observe the pattern and complete the answers.

1 × 3 =	2 × 3 =	4 × 3 =
10 × 3 =	20 × 3 =	40 × 3 =
100 × 3 =	200 × 3 =	400 × 3 =

2 × 4 =	4 × 2 =	8 × 1 =
20 × 4 =	40 × 2 =	80 × 1=
200 × 4 =	400 × 2 =	800 × 1 =

3 × 4 =	3 × 5 =	3 × 9 =
30 × 4 =	30 × 5 =	30 × 9 =
300 × 4 =	300 × 5 =	300 × 9 =

More Multiplication

1. Big electric autorickshaws run in small towns of India and can carry 8 passengers. How many people can travel in 125 such autos in a single round?



8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8

100 autorickshaws with 8 passengers each

8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8

20 autorickshaws with 8 passengers each

8	8	8	8	8

5 autorickshaws with 8 passengers each

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The total number of passengers 125 × 8.

×	8
100	100 × 8 = 800
20	20 × 8 = 160
5	5 × 8 = 40
	1000

100 autorickshaws with 8 passengers in each have 100 × 8 passengers = _____ passengers.

20 autorickshaws with 8 passengers in each have 20 × 8 passengers = _____ passengers.

5 autorickshaws with 8 passengers in each have 5 × 8 passengers = _____ passengers.

125 autorickshaws with 8 passengers in each have ____ + ____ + _____= _____ passengers.

2. Kahlu and Rabia are potters and make earthen pots *(kulhad)* for trains.

They pack 6 *kulhads* in a box and have packed 174 boxes for delivery.

How many *kulhads* have they made?

The total number of *kulhads* is _____.



100 boxes with 6 *kulhads* each

70 boxes with 6 *kulhads* each

4 boxes with 6 *kulhads* each

174

×	6
100	100 × 6 = ____
70	70 × 6 = ____
4	4 ×6 = ____

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Let Us Solve

1. BP Girl's school has decided to give all its students two pencils on the first day of school.
It has 465 students.
How many pencils does the school need to buy?

2. 234 children of a school have decided to organise a school mela. Each child contributes ₹5 for the organisation of the mela. How much money do they collect?

3. Make stories for the following problems and solve them.
   a) 439 × 4 b) 514 × 8
   c) 356 × 5 d) 623 × 7

More Division

9 boats have to ferry 108 people waiting along the banks of the Cauvery River. Every boat carries the same number of people. How many people should be ferried in each boat?

108 people are to be ferried in 9 boats.
In 1 boat, the number of people ferried is 108 ÷ 9.

If 5 people sit in each of the boats, then 45 people can be ferried in 9 boats.
If 5 more people sit along with them in each of the boats (total 10), then 90 people can be ferried in the 9 boats.

The remaining 18 people have to be adjusted in the 9 boats. 2 more people will have to sit in each of the boats.
So, the 9 boats need to take 12 people each.

```
9) 108 ( 5+5+2
  – 45
   63
  – 45
    18
  – 18
     0
```

9 boats need to take 12 people each.

Note for Teachers: Division problems are of 2 types—share and measure. In share problems, the number of equal groups is given (i.e the multiplier) leading to opportunities to share objects equally. The example above is a share problem. In measure problems, the size of each group is given (i.e, the multiplicand), like when we ask how many ants are there if the number of legs is 60. Including both kinds of problems is helpful for children.

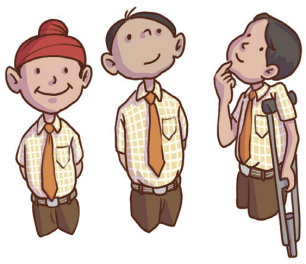
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Patterns in Division

How much money will each get? Draw arrows linking the money and the children to answer the questions.





1. ₹30 shared equally among 3 children _____
2. ₹900 shared equally among 3 children _____



Using the above way of thinking, solve the following problems.
Observe and explain the patterns that you notice below.

A

3 ÷ 3 = _____
30 ÷ 3 = _____
300 ÷ 3 = _____

5 ÷ 5 = _____
50 ÷ 5 = _____
500 ÷ 5 = _____

B

9 ÷ 3 = _____
90 ÷ 3 = _____
900 ÷ 3 = _____

8 ÷ 4 = _____
80 ÷ 4 = _____
800 ÷ 4 = _____

C

15 ÷ 3 = _____
150 ÷ 3 = _____
300 ÷ 3 = _____

4 ÷ 2 = _____
20 ÷ 2 = _____
100 ÷ 2 = _____

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1. A load carrying truck has 6 tyres. Chippi the lizard sees 60 tyres. How many trucks are there?
2. Chippi sees 80 wheels in a car parking space. How many cars are standing in the parking space?
3. Chippi sees 600 legs of ants walking towards the anthill. How many ants are there?
4. A fancy shop has packed 800 rubber bands in several packets. Each packet has 4 rubber bands.
   How many packets of rubber bands does the shop have?

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Let Us Solve

1. A school bus hires 7 buses to take 245 children to the transport museum. Each bus carry the same number of children. How many children are traveling in each bus?
2. The Darjeeling Himalayan Railway is fondly called the "Toy Train". This toy train ride is also a UNESCO World Heritage Site.
   This amazing train runs between New Jalpaiguri and Darjeeling and it also passes through one of the highest stations in the world, namely, Ghum. It runs 88 km daily. How much distance does it travel in a week?



3. The 16 Km river rafting from Shivpuri to Rishikesh in the Ganga provides the most interesting rafting opportunity. In the summer months, VentureOut company took 259 people for rafting. Each raft can take 7 people. How many rafts did it take?
4. Anu saves ₹45 every month by putting it in her piggy bank.
   a) How much money will Anu save in 6 months?
   b) She distributes the total money saved after 6 months among 6 of her friends. How much does each friend get?
   c) If she decides to distribute the saved money among 3 friends after 6 months, how much money will each get?
5. Raju drives an auto in his village and takes people to the bus stand. He makes 8 trips in a day. Which of the following questions can be exactly calculated with the above statement?
   a) How much money does he make in a day?
   b) How many trips does he make in 7 days?

Note for Teachers: Encourage the children to observe relationships between divisor, dividend and quotient, understand the relationship between quotients when the dividend is changed by 5 times/10 times, and the relationship between multiplication and division.

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c) How much time does one trip take?

d) How many trips does he make in 4 weeks?

6. Solve

a) 45 × 9 b) 507 × 7

c) 94 ÷ 4 d) 778 ÷ 6

e) 94 × 5 f) 396 × 4

g) 83 ÷ 3 h) 635 ÷ 5

7. In mathematics, some statements are always true, some are sometimes true, and some are never true.
Tick (√) in the appropriate column.

	Statement	Always True	Never True	Sometimes True
a)	Multiplying by 10 gives 0 in the ones digit of the number.			
b)	Multiplying a number by 2 gives an odd number.			
c)	Multiplying a number by 5 gives a number with 5 in the ones digit.			
d)	The number immediately after an odd number is an even number.			
e)	Halving any number gives an even number.			
f)	Adding 0 to a number increases the number by 1.			

Note for Teachers: The "always true, never true, or sometimes true" type of questions in math are designed to help students understand and evaluate the validity of mathematical statements under different conditions. They encourage critical thinking, testing conceptual understanding and encouraging students to reason logically with counter examples. They help students to move beyond rote memorisation to a better understanding of mathematical principles.



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Chapter 10

Elephants, Tigers, and Leopards

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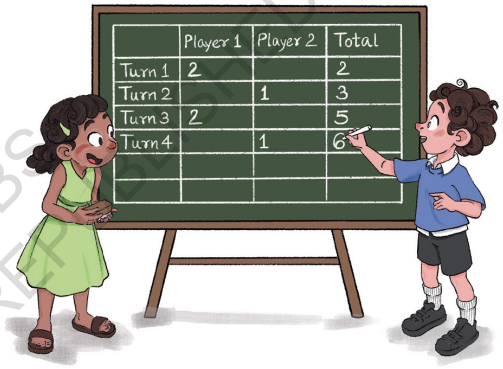


NIM Game *(2 Player Game)*

You have played a version of this game in the chapter 'Vacation with my Nani Maa' in Grade 3. We will add either 1 or 2 each time to reach the target number 10.

How to play?

1. Player 1 starts by choosing either 1 or 2.
2. Player 2 can also choose either 1 or 2 and add it to the number chosen by Player 1.
3. The two players continue playing by choosing either 1 or 2 and adding it to the previous total.
4. The player who reaches 10 first is the winner.
5. Play it for a few rounds.



Who wins in each of these cases?

Can you win the game if

a) the other player has reached the total of 6 and it is your turn?

b) the other player has reached the total of 7 and it is your turn?

c) the other player has reached the total of 8 and it is your turn?

Note for Teachers: Encourage learners to play this game with various target numbers. You could also help note down the sums and the results for learners to analyse.

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Play the game to reach other target numbers (like 10, 11, or 12) by adding 1 or 2 each time.

Can you find a number in each case when you are sure that you can win?

Addition Chart

Look at the table given below and discuss how the table is made.

+	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12	13
2	2	3	4	5	6	7	8	9	10	11	12	13	14
3	3	4	5	6	7	8	9	10	11	12	13	14	15
4	4	5	6	7	8	9	10	11	12	13	14	15	16
5	5	6	7	8	9	10	11	12	13	14	15	16	17
6	6	7	8	9	10	11	12	13	14	15	16	17	18
7	7	8	9	10	11	12	13	14	15	16	17	18	19
8	8	9	10	11	12	13	14	15	16	17	18	19	20
9	9	10	11	12	13	14	15	16	17	18	19	20	21
10	10	11	12	13	14	15	16	17	18	19	20	21	22
11	11	12	13	14	15	16	17	18	19	20	21	22	23
12	12	13	14	15	16	17	18	19	20	21	22	23	24

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1. Identify some patterns in the table.
2. Observe the cells where the number 9 appears in the table. How many times do you see number 9?

   What about other numbers?
3. Are there any rows or columns that contain only even numbers or only odd numbers? Explain your observation.

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4. Look at the window frame highlighted in red colour in the table.
   a) Find the sum of the two numbers in each row.
   b) Find the sum of the two numbers in each column. What do you notice?
   c) Now, find the sum of the numbers in each of the two diagonals marked by arrows. What do you notice?
   d) Now, put the red window frame in other places and find the sums as above. What do you notice?
5. Identify some patterns and relationships among the numbers in the blue window frame.

Reverse and Add

a) Take a 2-digit number say, 27. Reverse its digits (72). Add them (99). Repeat for different 2-digit numbers.

b) What sums can we get when we add a 2-digit number with its reverse?

c) List down all numbers which when added to their reverse give
   i) 55 ii) 88

d) Can we get a 3-digit sum? What is the smallest 3-digit sum that we can get?

Fill in the blanks with appropriate numbers.

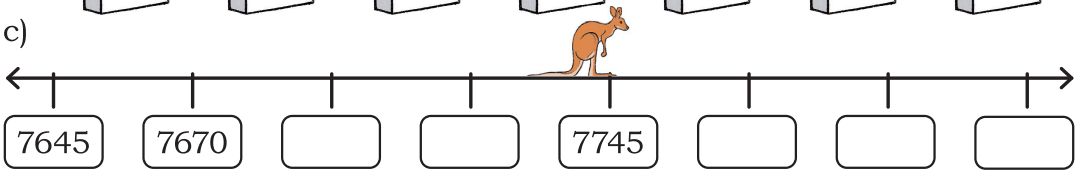
a)



b)



c)



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How Many Animals?



India is rich in biodiversity. It is home to some of the endangered wildlife, like elephants, tigers and leopards.

$\frac{3}{4}$ of the world's tiger population and $\frac{3}{5}$ of the Asiatic elephant population is in India.

1. The population of elephants in Karnataka is 6049 and in Kerala is 3054. How many total elephants are there in these two states?

Estimate the answer.

_____

6049 + 3054

6049

1000 1000
1000 1000
1000 1000

\+

3054

1000
1000
1000

10 10
10
10
10 10
10 10
10

1 1 1
1 1 1
1 1 1
1 1
1
1

10 O = 1 T

9 T + 1 T = 10 T
10 T = 1 H

9 Th + 9 T + 13 O

= 9 Th + 1 H + 0 T + 3 O

= 9103

There are 9103 elephants in Karnataka and Kerala.

	Th	H	T	O
		1	1	
	6	0	4	9
+	3	0	5	4
	9	1	10	13
	9	1	0	3

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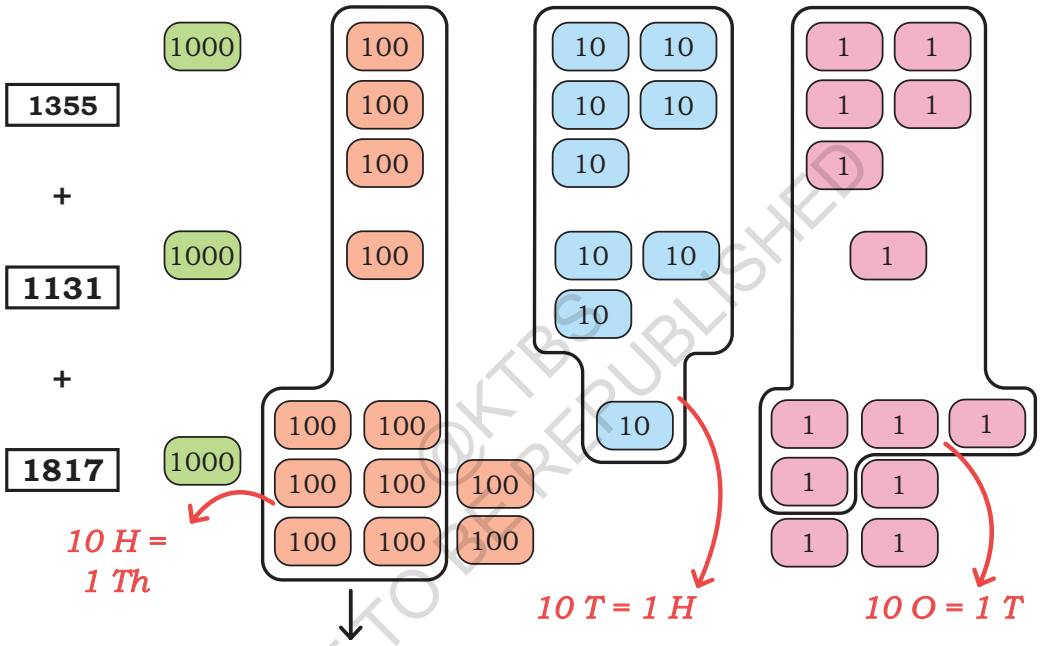
Chapter 10.indd 152 3/26/2025 12:50:18 PM

Estimate the answer.

_____

2. The highest number of leopards are found in three states. Gujarat has 1355, Karnataka has 1131 and Madhya Pradesh has 1817. How many total leopards are there in these states?

1355 + 1131 + 1817



3 Th + 12 H + 9 T + 13 O

= 4 Th + 2 H + 10 T + 3 O

= 4 Th + 3 H + 0 T + 3 O

= 4303

	Th	H	T	O
	(1)	(1)	(1)	
	1	3	5	5
	1	1	3	1
+	1	8	1	7
	4	13	10	13
	4	3	0	3

There are 4303 leopards in these three states.

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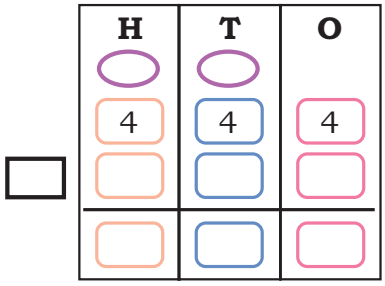
3. Maharashtra has 444 tigers. Madhya Pradesh has 341 more tigers than Maharashta. Uttarakhand has 116 tigers more than Maharashtra.

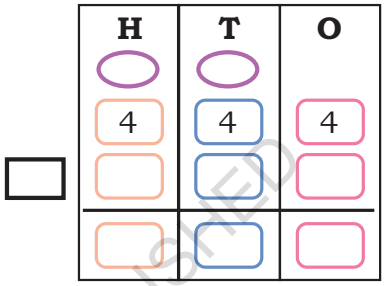
Remember

10 O = 1 T
10 T = 1 H
10 H = 1 Th

a) How many tigers does Madhya Pradesh have?

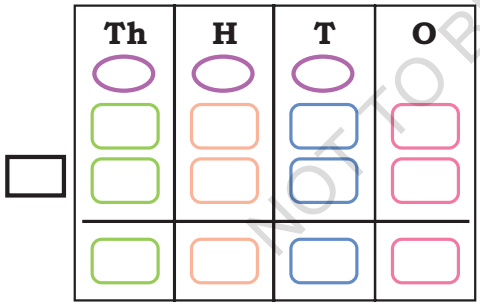
b) How many tigers does Uttarakhand have?

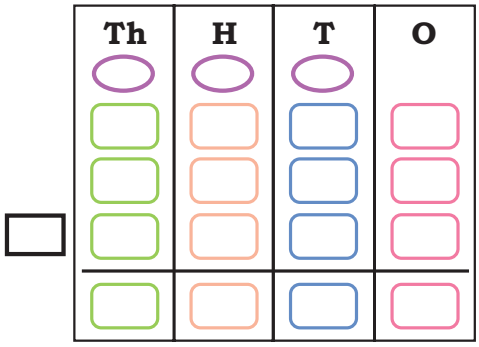




c) How many tigers does Madhya Pradesh and Uttarakhand have?

d) How many tigers are there in total across the three states?





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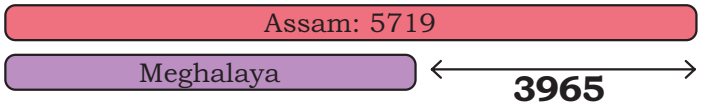
Note for Teachers: Support children with multiple examples using tokens until they can independently solve various types of problems without the materials. You could also support using box diagrams for solving word problems as suggested in the previous chapter.

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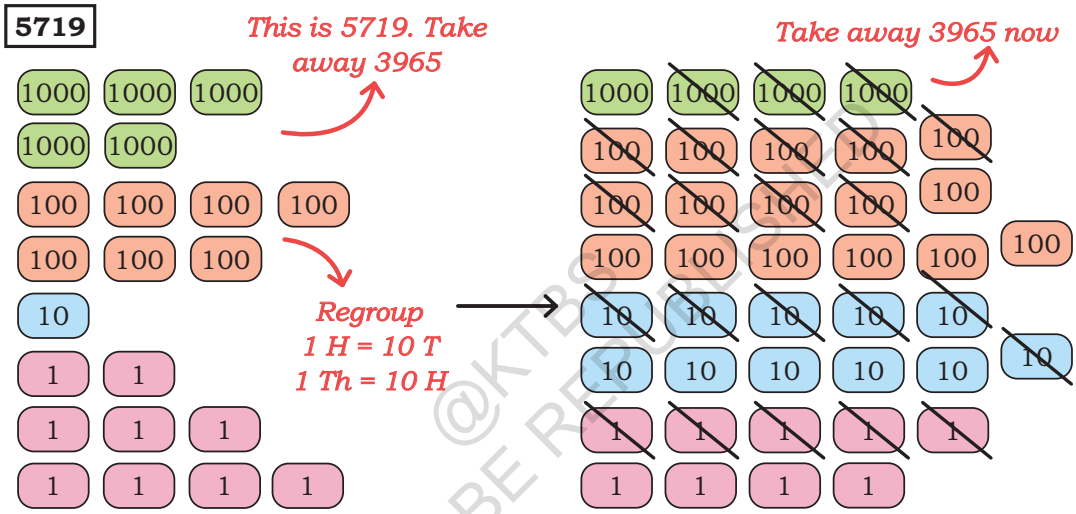
More or Less?

1. Assam has 5719 elephants. It has 3965 more elephants than Meghalaya. How many elephants are there in Meghalaya?

Estimate the answer.
_____



5719 – 3965



	Th	H	T	O
	4	16	11	
	5	7	1	9
–	3	9	6	5
	1	7	5	4

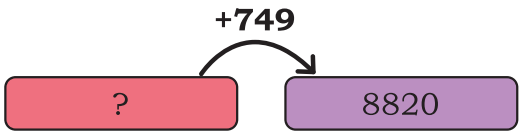
1754 elephants are there in Meghalaya.

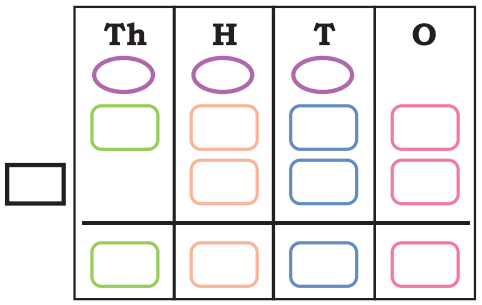
2. The population of leopards as per the 2022 census was 8820 in the Central India and the Eastern Ghats. It had increased by 749 in comparison to the number of leopards in 2018 in the same region. How many leopards were there in 2018?

Estimate the answer.
_____

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_____ leopards were there in 2018.

Write the number of animals on this map based on the data from the problems in the previous pages.



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Let Us Do

1. The board in the ticket office in the Kaziranga National Park shows the following:

WELCOME TO
KAZIRANGA NATIONAL PARK

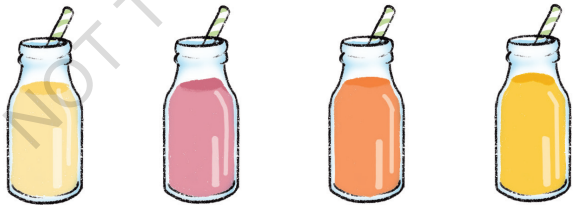
Month	Number of visitors
December	8591
November	6415
October	?

a) How many more visitors came in December than in November?

b) The number of visitors in November is 1587 more than October. How many visitors were there in October?

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2. In a juice making factory, women make different types of juices as given below:



Type of juice	Number of bottles packed in a month
Pineapple	1348
Guava	
Orange	
Passion Fruit	4781

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a) The number of bottles of guava juice is 759 more than the number of bottles of pineapple juice. Find the number of bottles of guava juice.

b) The number of bottles of orange juice is 1257 more than the number of bottles of guava juice and 1417 less than the number of bottles of passion fruit juice. How many bottles of orange juice are made in a month?

c) Is the total number of bottles of guava juice and orange juice more or less than the number of bottles of passion fruit juice? How much more or less?

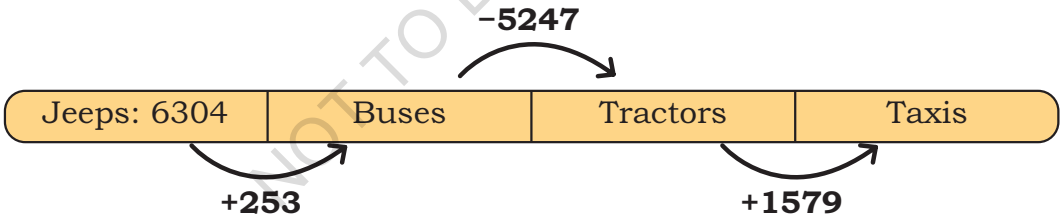
3. In a small town, the following vehicles were registered in the year 2022. Find the number of vehicles as per the conditions given below.

a) The number of buses is 253 more than the number of jeeps. How many buses are there in the town?

b) The number of tractors is 5247 less than the number of buses. How many tractors are in the town?

c) The number of taxis is 1579 more than the number of tractors? How many taxis are there?

d) Arrange the numbers of each type of vehicle from lowest to highest.



4. Solve

a) 1459 + 476
b) 3863 + 4188
c) 5017 + 899
d) 4285 + 2132
e) 3158 + 1052
f) 7293 – 2819
g) 3105 – 1223
h) 8006 – 5567
i) 5000 – 4124
j) 9018 – 487

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5. The children in a school in Chittoor are planning to organise a Baal Mela in their school.

Raju, Rani and Roja decided to raise some money to make arrangements for the mela. The money is availabe in notes of 500, 100, 50, 10 and coins of 5, 2 and 1. They decide to put the money in the School Panchayat Bank.

Raju



₹ 2045

Rani



₹ 3578

Roja



₹ 1240

Help each of the children fill the deposit slip given below.

Different combinations of notes can give the same amount. Can you guess a possible combination of notes they might have? Fill in the amounts appropriately.

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Deposit Slip

SPB

Date 2025

Account no.: _____ Name: Raju

Amount (in numbers): ₹2045

Total Amount (in words): _____

_____

_____

_____

Depositor's Signature:

Raju

Type of Note/ coin	No. of Notes/ coins	Amount
500	3	1500
100	3	300
50	2	_____
10	14	_____
5	1	_____
2	0	_____
1	0	_____
Total	_____	_____

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Deposit Slip

SPB

Date D D M M Y Y Y Y

Account no. _____ Name: Rani

Amount (in numbers):_____

Total Amount (in words):_____

_____

_____

_____

Depositor's Signature:

Type of Note/ coin	No. of Notes/ coins	Amount
500		
100		
50		
10		
5		
2		
1		
Total		

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Deposit Slip

SPB

Date D D M M Y Y Y Y

Account no. _____ Name: Roja

Amount (in numbers):_____

Total Amount (in words):_____

_____

_____

_____

Depositor's Signature:

Type of Note/ coin	No. of Notes/ coins	Amount
500		
100		
50		
10		
5		
2		
1		
Total		

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Let Us Solve

1. Solve

a)

	Th	H	T	O
	3	6	9	5
+	4	2	0	8

b)

	Th	H	T	O
	2	5	0	7
+	6	8	4	7

c)

	Th	H	T	O
	6	3	5	2
−	3	5	2	1

d)

	Th	H	T	O
	8	8	0	3
−	5	7	2	6

2. Arrange the following in columns and solve in your notebook.

a) 3683 – 971
b) 8432 – 46
c) 4011 – 3666
d) 5203 – 2745

e) 1465 + 632
f) 3567 + 77
g) 8263 + 3737
h) 5429 + 3287

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Let Us Solve

1. Find easy ways to solve the following problems. Write the answers in the given space. Share your thinking with the grade .

a) 8787 – 99 =_____

Subtract 100, then add 1.

b) 4596 + 104=_____

c) 3459 + 21 =_____

d) 5010 + 95 =_____

(e) 4990 + 310 =_____

(f) 7844 – 15 =_____

(g) 260 + 240 =_____

(h) 1575 – 125 =_____

(i) 3999 + 290 =_____

2. Use the signs <, =, > as appropriate to compare the following without actually calculating. Try to reason them out and share in grade .

54 + 97 ☐ 54 + 90

84–68 ☐ 90–68

76 + 85 ☐ 80 + 86

73–54 ☐ 73–56

Same number.

Notice what is being subtracted on the left and on the right

3. Use the given information to find the values. Share your reasoning with the grade .

139 + 175 = 314

314 – 175 = _____

845 – 394 = 451

845 – 395 = _____

354 + 167 = 521

354 + 168 = _____

456 + 209 = 665

446 + 219 = _____

Note for Teachers: Encourage children to solve these problems without working out the algorithm but by noticing other ways to solve them. Notice the ways the numbers on both sides increase and decrease and the results. You could model these with some materials like Dienes block or tokens. You could give more such problems to the children.

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Chapter 10.indd 162 04-04-2025 10.22.38 AM

1. Add

a) 2783 + 378
b) 8948 + 97
c) 7006 + 367
d) 8009 + 485
e) 6062 + 3809
f) 3792 + 2688
g) 4999 + 3888
h) 5005 + 4895
i) 5768 + 4053
j) 3480 + 479

2. Subtract

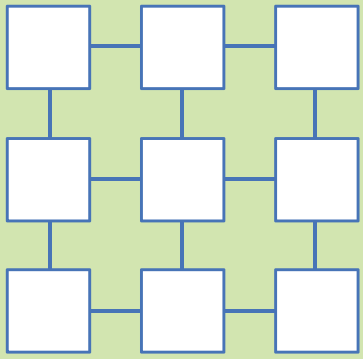
a) 4456 – 2768
b) 5300 – 467
c) 8067 – 4546
d) 5302 – 1034
e) 8004 – 3107
f) 3400 – 897
g) 9382 – 4857
h) 7561 – 2933
i) 6478 – 5986
j) 3444 – 2555

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3. Fill the squares with the numbers 1–9. The difference between any two neighbouring squares (connected by a line) must be odd.

Can you find other ways to fill the squares?

Can you do the same thing such that the difference between any two neighbouring squares is even?



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Chapter 11

Fun with Symmetry

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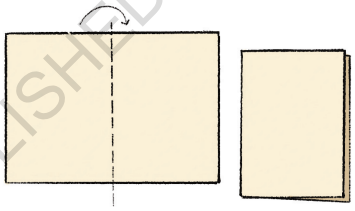
In previous grades, we have explored symmetry in rangolis, masks, bead strings and in buildings.

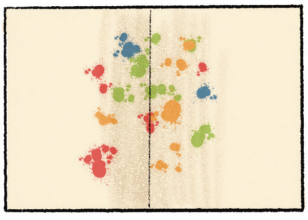
Let us explore more about symmetry.

Let Us Do

1. Ink Design

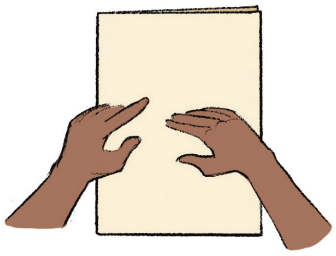
Step 1: Take a sheet of paper and fold it in half.





Step 2: Open it and sprinkle some drops of water colours in the centre of the fold.

Step 3: Press it to spread the colour evenly.





Step 4: Look what you made!

Is it a symmetrical pattern?

Where would you draw the line that divides this design into two equal halves?

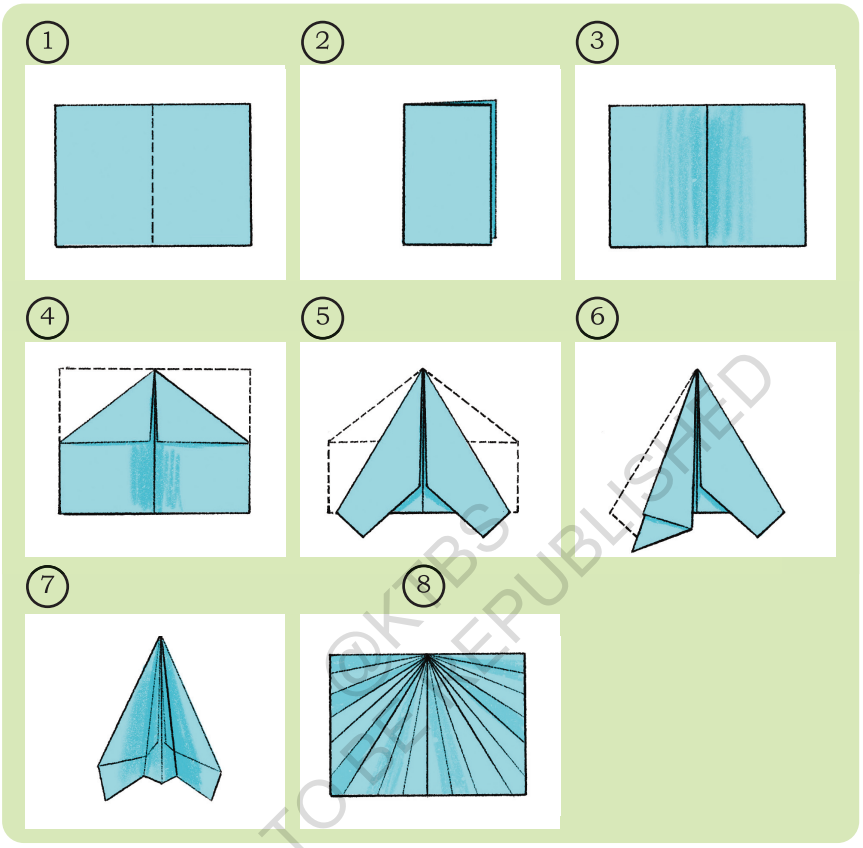


Isn't this line called the line of symmetry? I made it while making masks and rangolis in Grade 3 too.

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2. Making a paper airplane

Follow the steps.



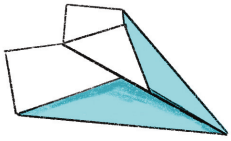
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a) Mark the line of symmetry in Fig. 3, Fig. 4, and Fig. 5.

b) How many lines of symmetry can you see in Fig. 8?

c) Where will you place a mirror to see the reflection of the right half side of Fig. 8? Will it look the same as the left half side?

d) Fly the plane.



e) Will the plane fly if there is no line of symmetry?

f) Try to make an asymmetrical plane.

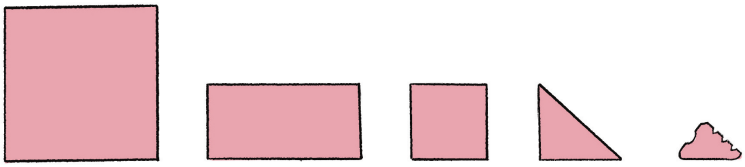
g) Fly both the planes and see which plane flies for a longer time.

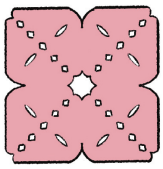
h) Share your observations with your friends.

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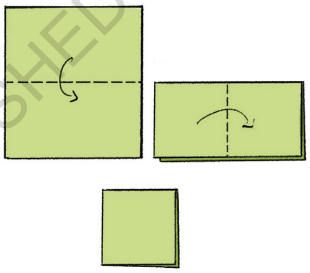
3. Holes and Cuts

Mini has made this design by folding and cutting paper.

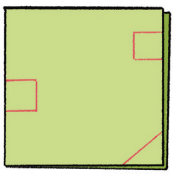




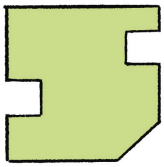
Now it's your turn! Take a square sheet of paper. Do as instructed below.



Let us see what Rani is making. Rani takes a piece of paper and folds it twice.



She makes a straight cut at the corner and cuts out two squares on two sides as shown in the picture.



Challenge 1: Where would the hole and cut appear when you open the paper?



Challenge 2: Fold a piece of paper once; put two cuts in the middle as shown. How many sides will this shape have when you open the folded paper?

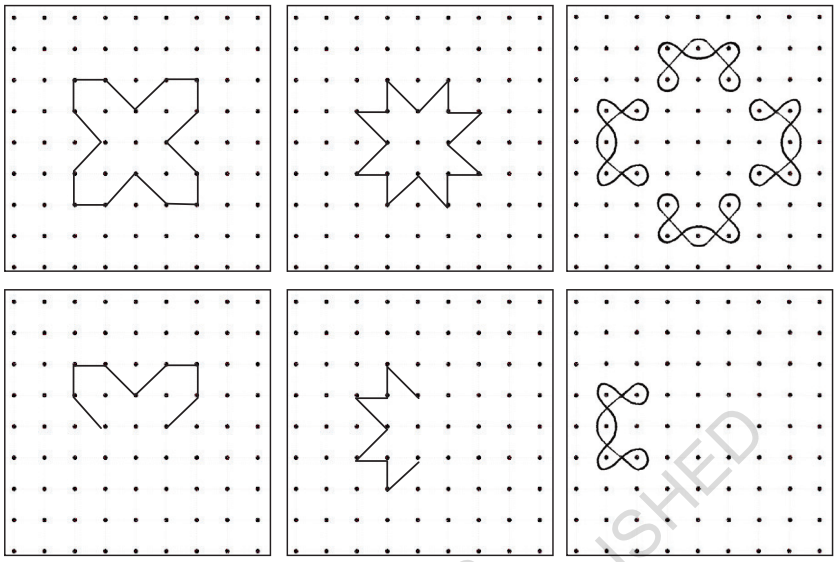


Challenge 3: Fold a paper twice. Where would you cut to make a square hole in the center of the paper? How many cuts are required?

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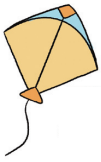
4. Complete the designs below



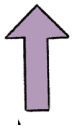
Let Us Do

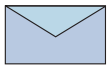
Symmetry in shapes

1. Look at the shapes given along the border. Draw these shapes on the dot grid. Which of the shapes are symmetrical? Draw the lines of symmetry.











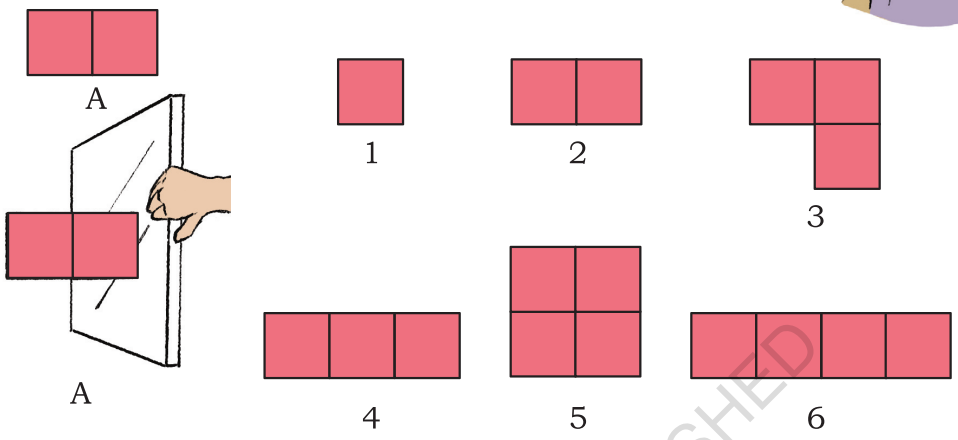
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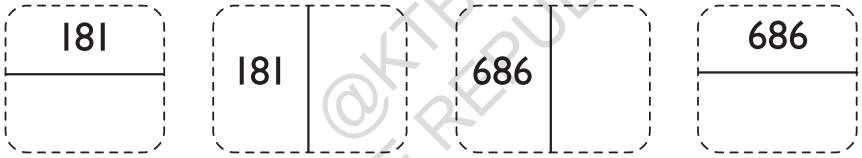
2. Games with a Mirror



a) Where should we place the mirror in shape A to get the shapes given below?



b) Circle the numbers whose mirror image is the same number.

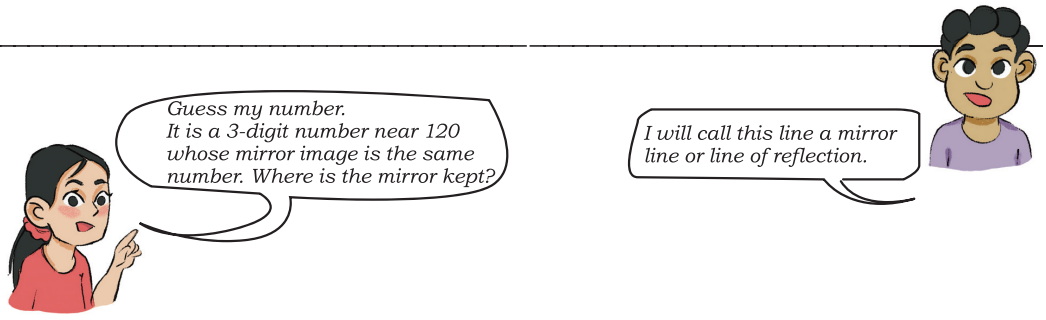


Which digits from 0 to 9 have the same mirror image? _____

Make some 4-digit numbers such that the mirror image is the same number. Where would you keep the mirror in each case? How many such numbers can you make?

_____ _____

_____ _____

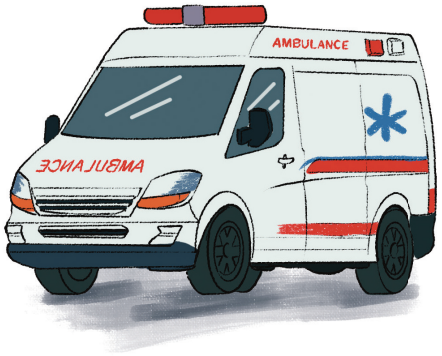


c) Make similar questions and ask your friends to guess the numbers.

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3. What do you notice about the letters written on the ambulance? Why are they written this way? Discuss.



TAC



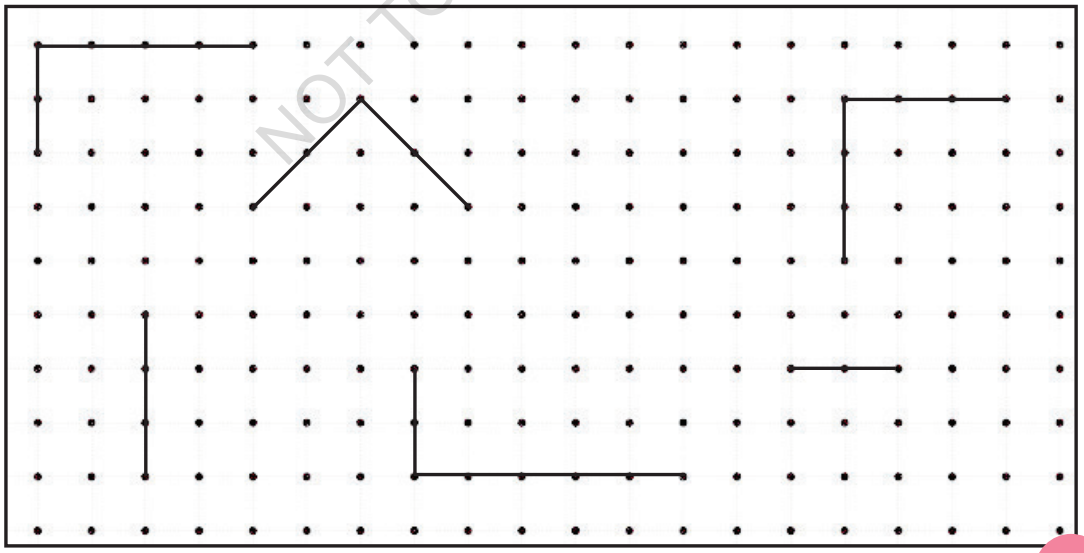
Can you identify these words? Where will you place the mirror to read the following words correctly?

ꟻAT NAC MOM NEH

Now, you try to write some words/names in this way and challenge your friends to guess them.

Can you also try doing this with the script of your own language?

4. Complete the following to make symmetrical shapes.

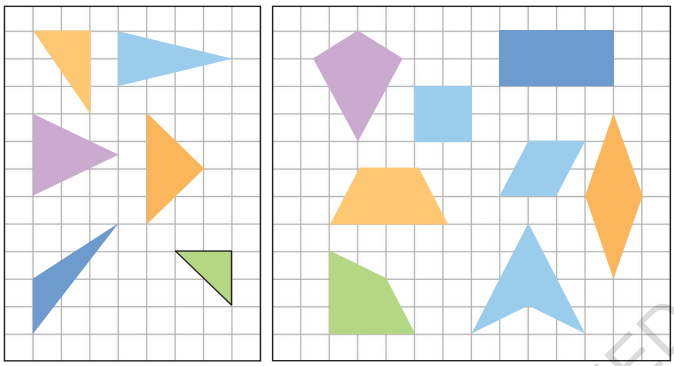


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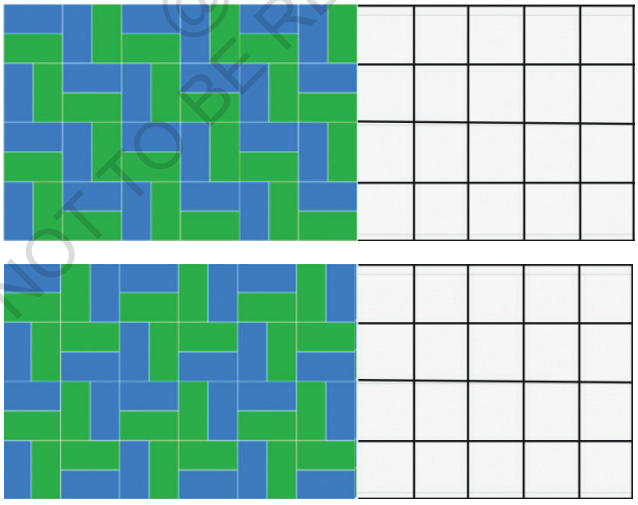
5. Observe the shapes. How many sides does each shape have?

How many lines of symmetry does each shape have? You may trace these shapes and check the lines of symmetry by folding the shapes.



Tiling the Tiles

Here are some patterns with tiles. Identify the repeating unit (tile) and continue the patterns.



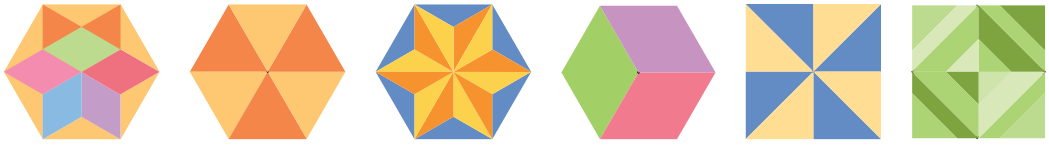
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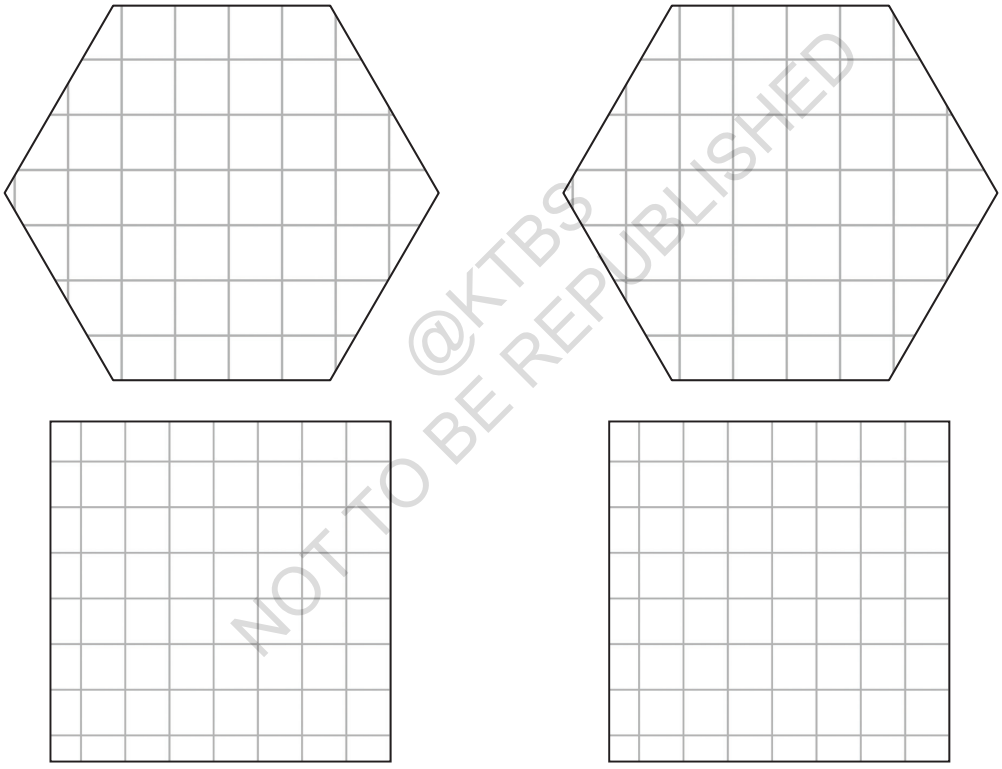
Note for Teachers: Let the students realise that just by changing the position and colour, different tiles can be created. Here, students may identify different repeating units as tiles. Let the students use terms, such as sliding, flipping, rotating, standing, sleeping, etc. Students may also see a group of 8 rectangles as a repeating unit.

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Tiles at the Tile Shop

Bablu *Chacha* makes beautiful tiles of the kinds shown below. Design creative tiles of your own in the spaces given below. You may use a rangometry kit or shape cutouts.



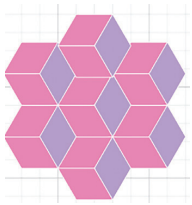


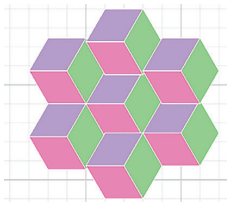
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1. Which shapes have you used to make the tiles?
2. Which of the tiles are symmetrical? Draw the lines of symmetry (if any).
3. Make more tiles by joining two or more shapes. Trace them in your notebook to create paths with no gaps or overlaps.

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4. Look at the following shapes. What do you notice? Discuss.



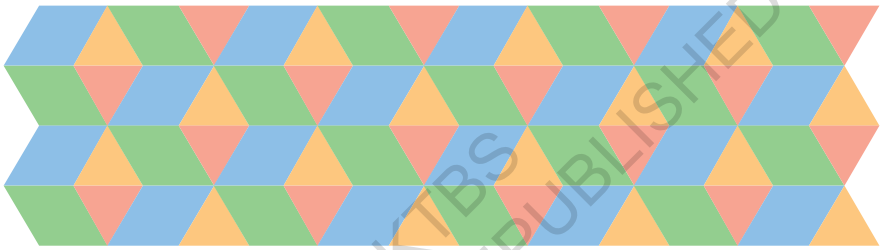


Let Us Do

1. Make floor patterns with your tile. Mini has made a floor pattern as shown below.

   Remember there should be no overlaps and no gaps.





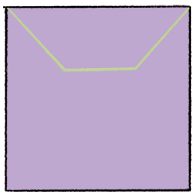
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Note for Teachers: Encourage students to ask questions about the two designs. For example, how many shapes have been used? Would the design look the same if only one colour is used? Encourage children to create different designs using the same shapes with different colours.

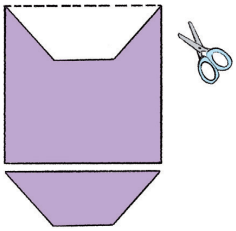
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2. Making a catty wall!

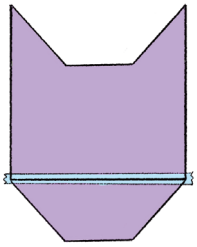
Step 1: Take a square piece of paper. Mark as shown to make the cat's head and ears.



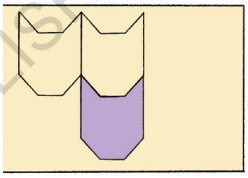
Step 2: Now, cut along the outline and slide the top piece down to align with the larger piece.



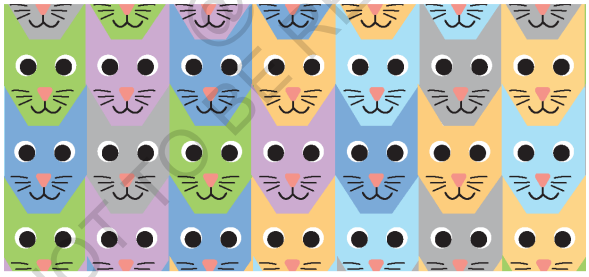
Step 3: Tape the pieces together.



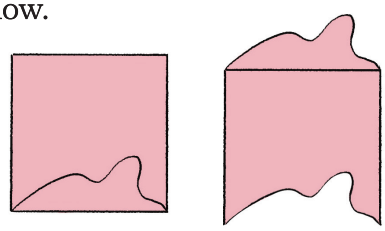
Step 4: Now the real fun begins! Trace the outline of the cat pattern on a large piece of paper and make its face.

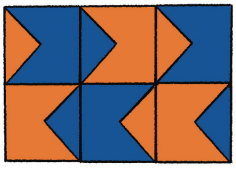


Your wall is ready.



Create more of these tiles. Some ideas to make creative wall patterns are given below.





Isn't it fun? Just cut, slide, and paste. Your tile is ready to make a creative wall.



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3. Let us go on a nature walk (Project time)



Go for a nature walk to a nearby park or around your school with your teacher or your parents. Observe the patterns, designs, or symmetry around you carefully. Collect leaves, petals, and flowers that have fallen on the ground.

In your project file:

- Categorise the leaves into symmetrical and non-symmetrical.
- Make different designs and patterns with leaves and flowers.
- Make a greeting card using imprints of leaves or dry flowers.
- Create animals or designs using leaves and flowers.

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Chapter 12

Ticking Clocks and Turning Calendar

0433CH12



Parv is celebrating his birthday with his friends. Let us join them.



I was born on 29 February 2016. Years having the date 29 February are called leap years. Such years have one additional day in the year and occur every four years.

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Let Us Do

1. Notice the number of days in February in the years 2024 and 2025.

FEB 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

FEB 2025						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

Number of days in Feb 2024 = _____

Number of days in Feb 2025 = _____

2. Fill in the blanks with consecutive leap years before and after 2024.

   _____, _____, 2024, _____, _____, _____

3. We know that most years have 365 days. How many days would a leap year have?

4. Write the names of the months when you celebrate your favourite festivals.

Name of the Festival	Name of the Month

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5. Answer the following questions by writing the appropriate days of the week:

   a) Today: _____

   b) Yesterday: _____

   c) Tomorrow: _____

   d) Day after tomorrow: _____

   e) Day before yesterday: _____

6. July 1 is a Monday. Write the dates for the next two Mondays.

   _____

7. Laali is born on 04/07/2014 and Chotu is born on 04/12/2019. Who is older among the two and how much?

   Laali will turn 5 years old on _____.

   Chotu's 10th birthday will be celebrated on _____.

Do You Know?

04/07/2024 is a date in DD/MM/YYYY format. And this is read as 4th of July 2024 or July 4, 2024.

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8. Check the manufacturing and expiry dates on the wrapper of any biscuit packet.

   a) How old is the packet of biscuits?

      Answer: ____ months ____ days.

   b) How many more days are the biscuits safe to eat?

      Answer: ____ months ____ days.

9. Notice the day on which July 15 falls in your calendar. Now find out what day is August 15? September 15? October 15? What pattern do you notice? Share in grade.

   Now choose a date and look up the day on which it falls. Challenge your friends to guess what day will the same date fall in the following month.

Let Us Explore

With the help of your parents and teachers, explore the names of the months in the Hindu/Islamic/Sikh or any other calendar of your community.

1. Find out when the year begins in each of these calendars.
2. Check how the names of the months in these calenders correspond to the months in the English calendar.
3. Identify the months from the Hindu/Islamic/Sikh or any other calendar in which some of the important festivals of the community fall.
4. Identify the dates of the new moon and full moon in your community's calendar every month. Do you notice any pattern?
5. How are the full moon or new moon days named in your community's calendar?

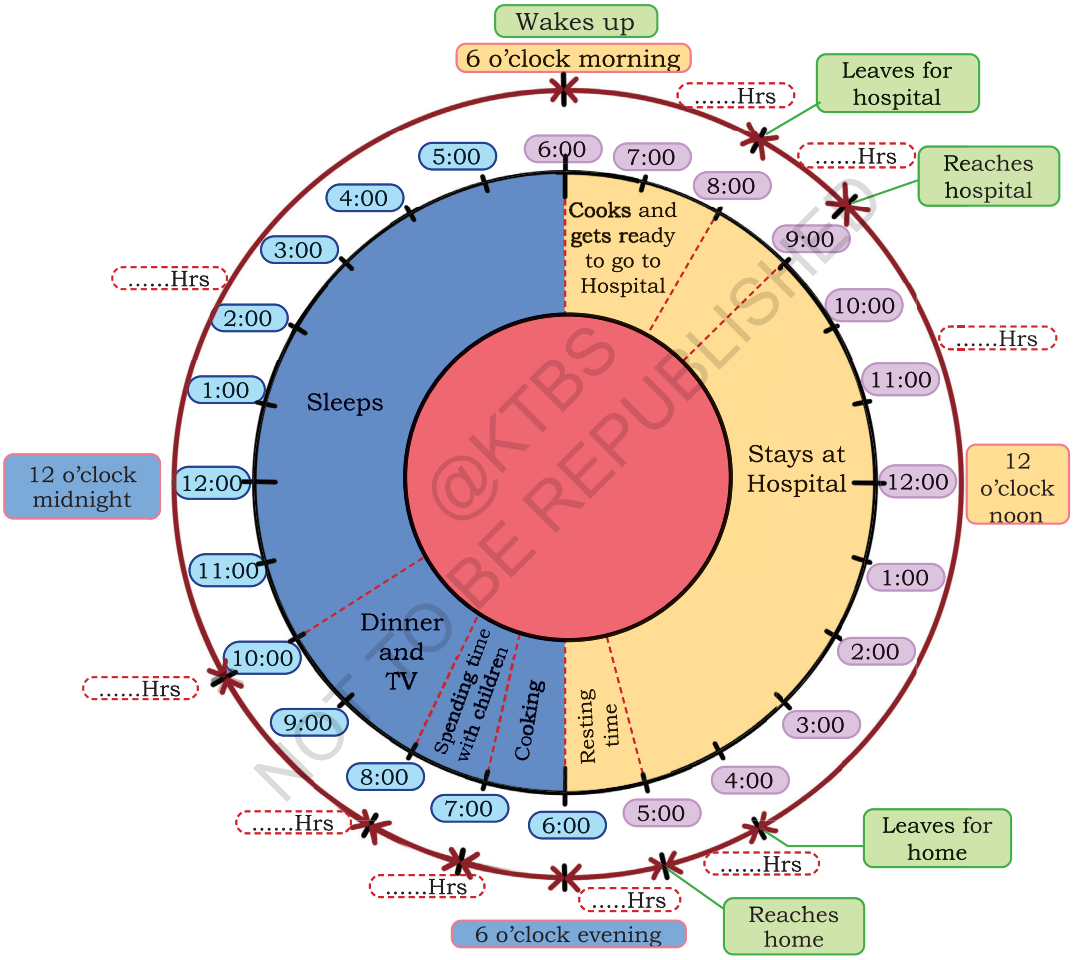
Note for Teacher: Students may be asked to collect wrappers of different items and make a table of expiry periods for them.

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How many hours in a day?

Look at the picture below. It shows the time spent on different activities by a doctor. Write the number of hours spent on each activity in the space provided. Then, find the total number of hours between 6 o'clock morning to 6 o'clock evening and 6 o'clock morning of the next day.



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The total number of hours is _____.

Note for Teachers: Help the children count the duration of the activities in the picture given above and find the total number of hours in a day.

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In both the pictures we see 8:00 on the clock. But one is morning and the other is night time. We add AM and PM to show this difference.

8:00 AM

8:00 PM

Digital clocks help us read the time more clearly.





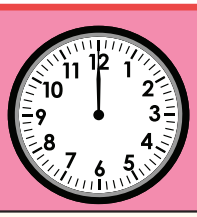
Read the following table and see how we read and write time using AM/PM and the digital clock. Discuss what you notice about the two different ways.

Note for Teacher: Help children understand the difference between AM and PM and how it eases communication about time among people. You may seek children's routine experiences and associate them with AM and PM. You may draw their attention to the 24-hour clock and how it shows time and make children practice reading and writing it.

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Fill in the blanks by writing time in the appropriate format.

Time in AM/PM 	Time in the digital clock 
12:00 AM	00:00 hours
1:00 AM	1:00 hours
3:00 AM	3:00 hours
7:15 AM	7:15 hours
9:45 AM	_____ hours
_____	11:20 hours
12:00 PM	12:00 hours
1:00 PM	13:00 hours
3:00 PM	_____ hours
5:20 PM	_____ hours
_____	20:00 hours
11:45 PM	23:45 hours

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Hours and minutes



Raghav brings milk from the market every morning.



8:20



8:35

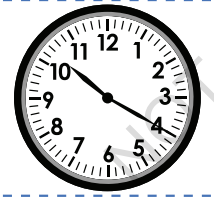
Raghav leaves home at 8:20 AM and returns back at 8:35 AM.

How much time has he taken? _____

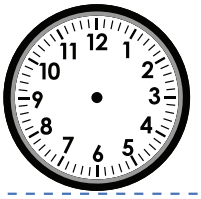
Let Us Do

1. Show the appropriate times on the clock as per instructions.

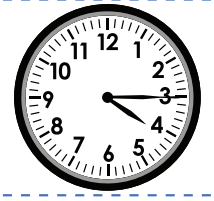
   a) Raghav started doing his homework at 10:20 AM. He took 25 minutes to finish it. Show the time that he finished his homework.



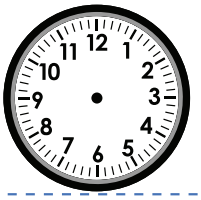
Time after 25 minutes



   b) Muneera starts reading a story at 4:15 PM. She finishes reading it in 45 minutes. Show the time that she finished reading the story.

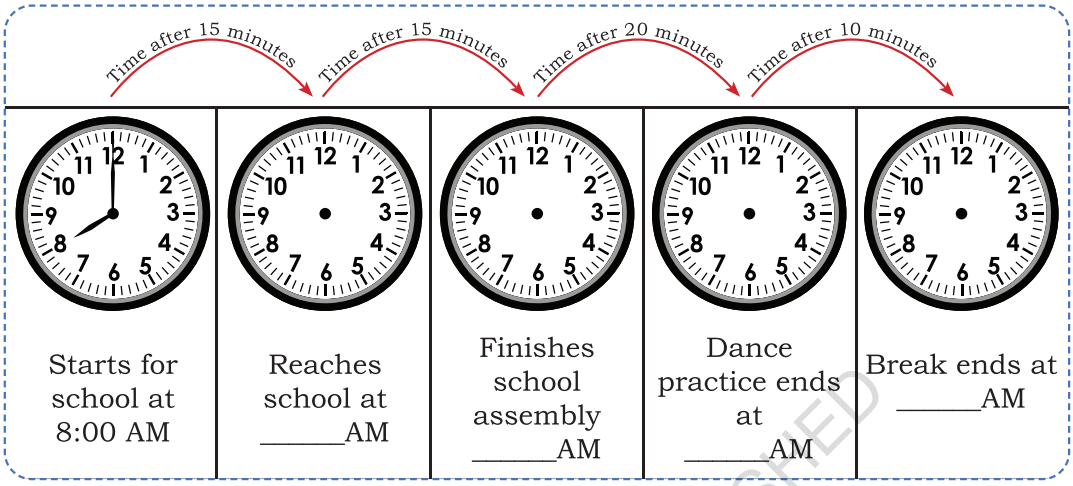


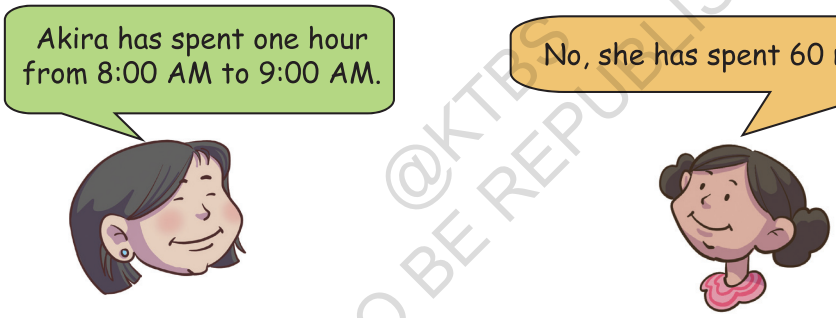
Time after 45 minutes



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c) Akira leaves for school at 8:00 AM. She reaches school in 15 minutes.

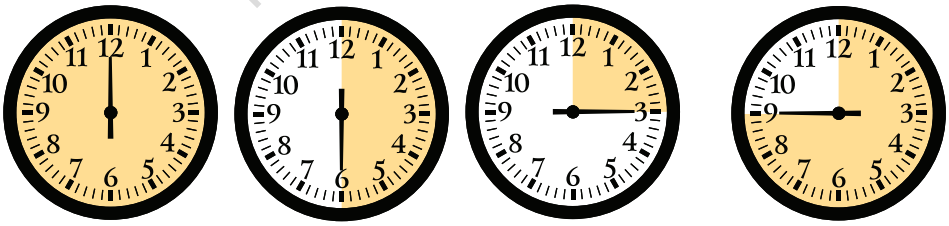




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Who do you think is correct? Is there any relation between 1 hour and 60 minutes?

Observe the shaded portions



One hour (1 hour) = 60 minutes	Half hour = ____ minutes	Quarter or $\frac{1}{4}$ of an hour= 15 minutes	Three Quarters or $\frac{3}{4}$ of an hour= ____ minutes

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Find out how much time you take to

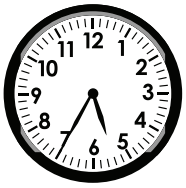
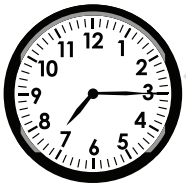
a) boil milk

b) fill water from tap in a bucket

What activities can you do in 5 minutes?

Let Us Check

Three friends read time from a clock. Who is right? Discuss the error and explain how one reads the clock correctly.

	Raghu	Raghav	Rani
	12:04	12:20	04:00
	07:07	07:25	05:35
	03:07	03:35	07:15

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Note for Teachers: Help children figure out the connection between a half hour, a quarter hour, 30 min and 15 min.



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Chapter 13

The Transport Museum

0433CH13



Mystery Matrix

Fill the yellow boxes with 1-digit numbers (multiplicands and multipliers) such that you get the products given in the white boxes.

Fill the remaining white boxes with appropriate products.

×				
	32			
			42	
		45		
			21	

The product of the numbers in each row is given in the orange boxes. The product of the numbers in each column is given in the blue boxes. Identify appropriate numbers to fill the blank boxes.

		56
		54
63	48	

		42
		50
60	35	

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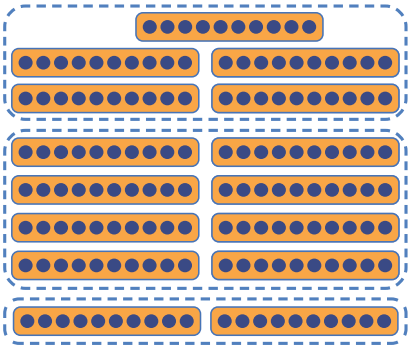
Times-10

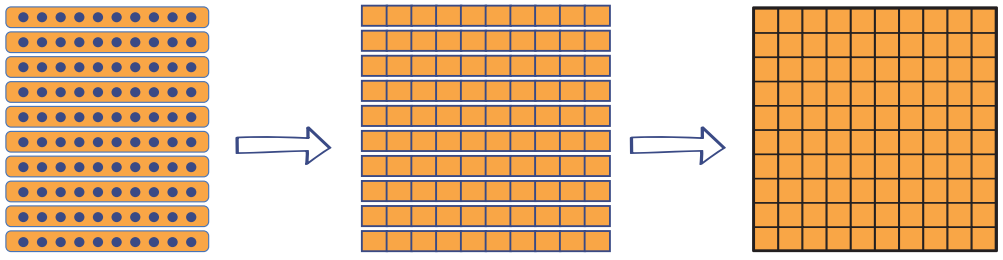
Match each problem with the appropriate pictorial representation and write the answer.

2 × 10 = 2 Tens = _____

5 × 10 = _____ Tens = _____

8 × 10 = _____ Tens = _____



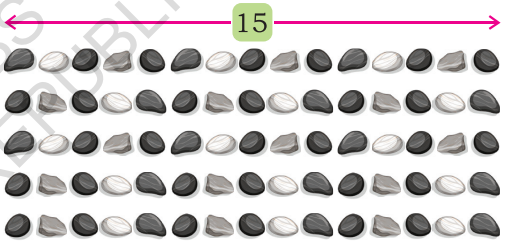


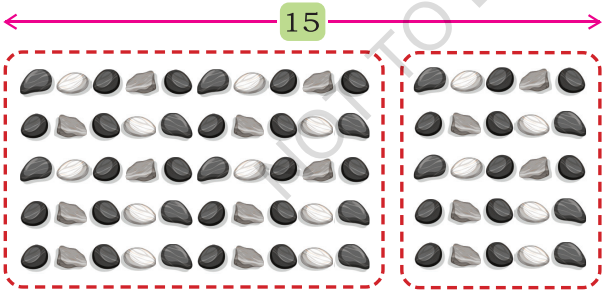
10 Tens 10 Tens 1 Hundred =100

What is 10 × 10 = ____ Tens = _____

Constructing Tables

How many pebbles are there in this arrangement? _____





This is a 5 × 15 arrangement. There is an easy way to find this product by splitting the arrangement.

5 × 15 = 5 × 10 and 5 × 5

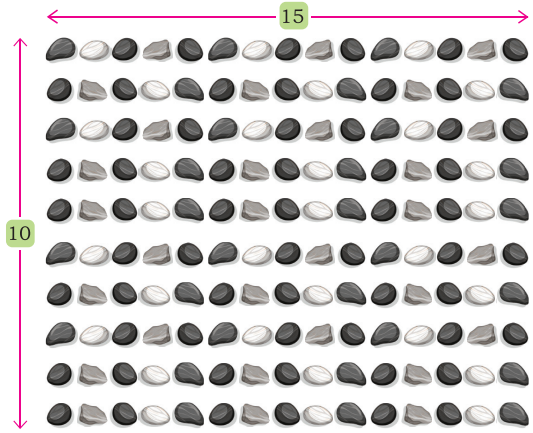
= _____ + _____ = _____

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Recall the times-tables that we created in Grade 3. Now construct a times-15 table. You may use the arrangement given below and split the columns into 10 and 5 for ease of counting, as shown on the previous page.

How can we find 1 ×15, 2 ×15, ... with this?



1 × 15 = ___	6 × 15 = ___
2 × 15 = ___	7 × 15 = ___
3 × 15 = ___	8 × 15 = ___
4 × 15 = ___	9 × 15 = ___
5 × 15 = ___	10 × 15 = ___

1. What patterns do you see in this table?
2. Compare the times-15 table with the times-5 table. What similarities and differences do you notice?

What times-table is this? ____ How did we get this?

Times - 5	Times - 15
1 × 5 = 5	1 × 15 = 15
2 × 5 = 10	2 × 15 = 30
3 × 5 = 15	3 × 15 = 45
4 × 5 = ___	4 × 15 = ___
5 × 5 = ___	5 × 15 = ___
6 × 5 = ___	6 × 15 = ___
7 × 5 = ___	7 × 15 = ___
8 × 5 = ___	8 × 15 = ___
9 × 5 = ___	9 × 15 = ___
10 × 5 = ___	10 × 15 = ___

15 – 5 = 10

30 – 10 = 20

45 – 15 = 30

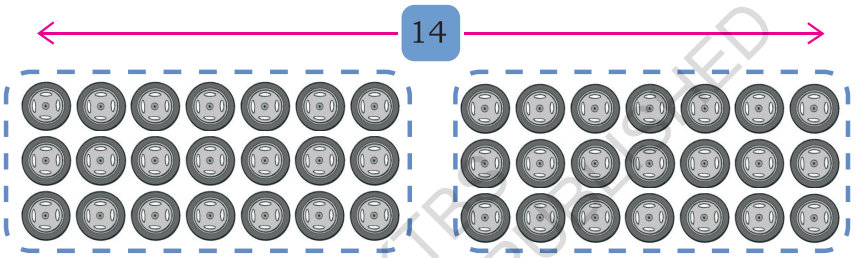
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3. Construct other times-tables for numbers from 11 to 20, as you did for 15.
4. As you compared the times-5 table with the times-15 table, compare the times-1 table with the times-11 table, the times-2 table with the times-12 table, and so on. Share your observations.

Making tables by splitting into equal groups

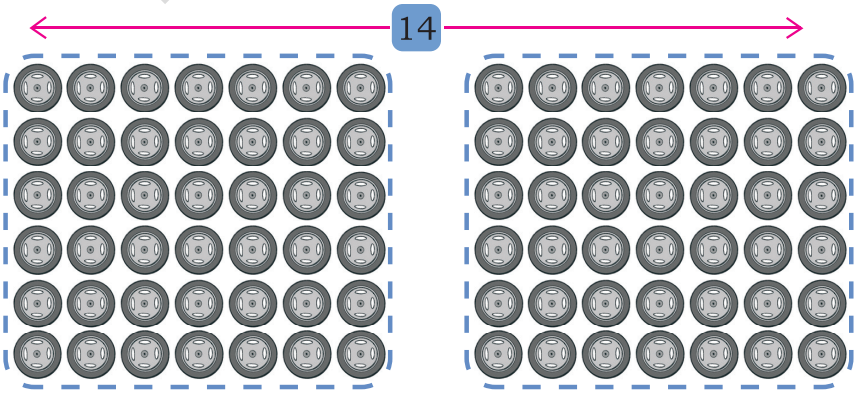
Here is an arrangement of wheels. To count the total number of wheels, Tara splits them into two equal groups.



$3 \times 14 = 3 \times 7$ and 3×7
$= 21 + 21$ = double of 21
$= 42$

Similarly, 6×14 can be obtained by splitting the arrangement into two equal groups.

6×14 = Double of 6×7
Why?



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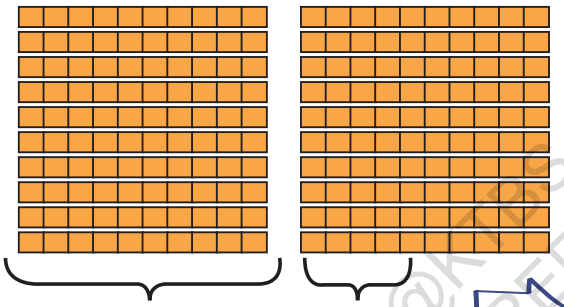
Chapter 13.indd 187 3/26/2025 4:18:55 PM

$6 \times 14 = 6 \times 7$ and 6×7
$= 42 + 42$ = double of 42
$= 84$

We have seen how to calculate 3×14 and 6×14 by splitting and doubling. Can we construct the times-14 table by splitting and doubling? Try!

What other times-tables can be constructed by splitting into equal groups and doubling? Give examples.

Multiples of 10



$14 \times 10 = 14$ Tens
$= 10$ Tens $+ 4$ Tens
$= 100 + 40$
$= 140$

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Find the answers to the following:

a) $15 \times 10 =$ _____ Tens = _____

b) $16 \times 10 =$ _____ Tens = _____

c) $19 \times 10 =$ _____ Tens = _____

d) $20 \times 10 =$ _____ Tens = _____

$10 \times 10 =$ ____
2 times (i.e., double of) $10 \times 10 =$ ____

Discuss in grade what happens when we take several groups of 10.

Note for Teachers: Support the learners in understanding multiplication when group size is a multiple of 10. Language of 'tens' is a useful way to think about this.

For example: 16×10 = 16 Tens is 160

$16 \times 20 = 16 \times 2$ Tens = 32 Tens = 320



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Now think and answer the following problems.

30 × 10 = _____ 40 × 10 = _____ 70 × 10 = _____

50 × 10 = _____ 60 × 10 = _____ 80 × 10 = _____

Let us find the number of people who can travel in 26 tempo travellers.
26 × 10 = _____ travellers.

26 × 10 = 26 Tens = 20 Tens + 6 Tens = 200 + 60 = 260

Answer the following questions. Share your thoughts.

a) 21 × 10 = _____

b) 42 × 10 = _____

c) 65 × 10 = _____

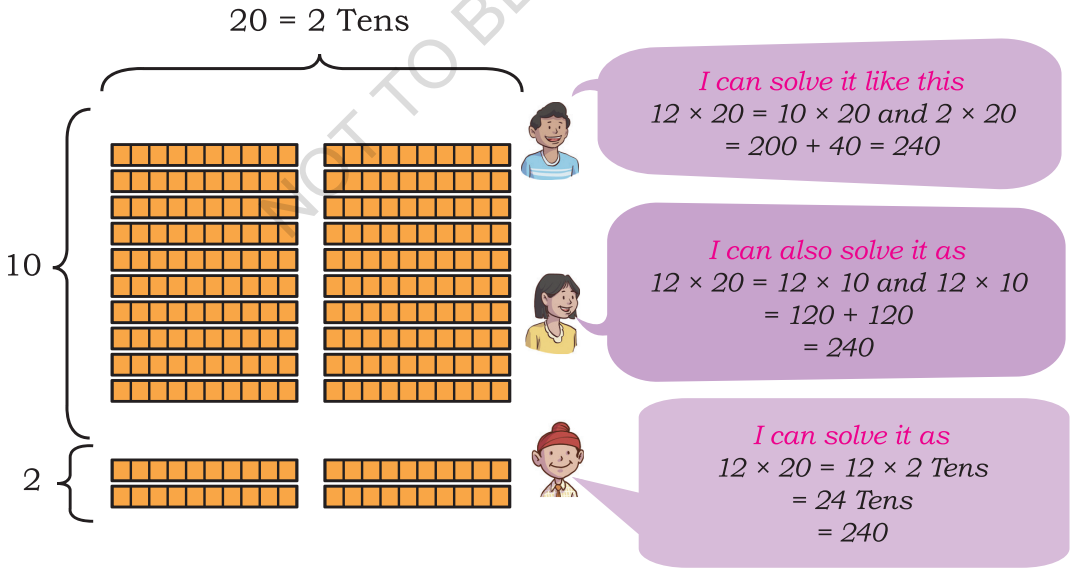
d) 38 × 10 = _____

e) 53 × 10 = _____

f) 87 × 10 = _____

A small bus can seat 20 people. How many people can be seated in 12 buses?

Now let us do 12 × 20.



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Solve the following problems. Share your thoughts.

24 × 40 = _____

50 × 60 = _____

13 × 30 = _____

43 × 60 = _____

70 × 80 = _____

A Day at the Transport Museum



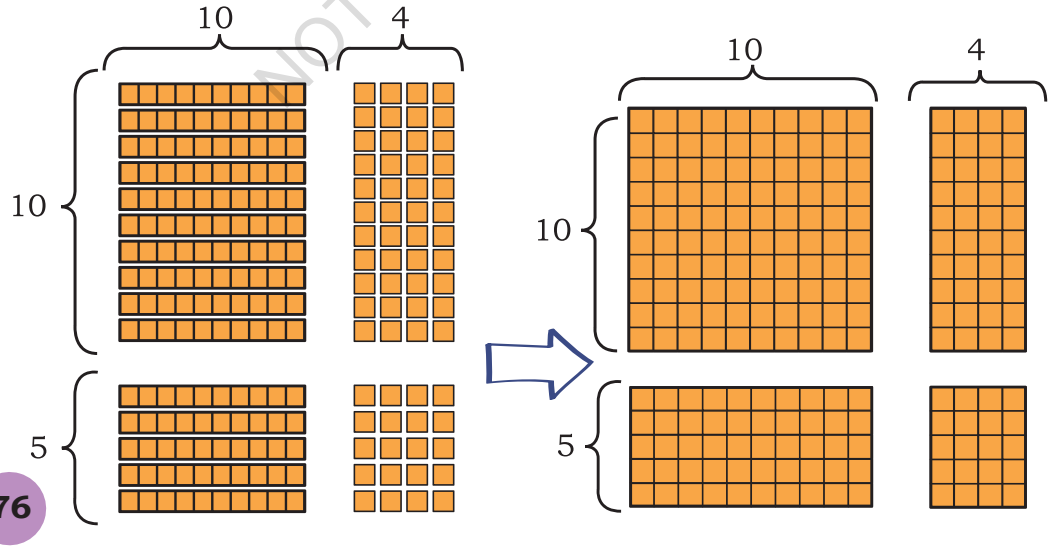
Amala, Raahi and Farzan are visiting the "Transport Museum".

This museum has a collection of different modes of transport used by people in India. It includes several vehicles from the olden days.

Raahi spots a toy train. She figures out that each coach can seat 14 children. The toy train has 15 coaches.

How many children can be seated in the toy train?

We have to find 15 × 14.



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×	10	4
10	10 × 10 = 100	10 × 4 = 40
5	5 × 10 = 50	5 × 4 = 20
	150	60
		210

15 × 14 = 100 + 40 + 50 + 20
= 210
In 15 coaches, 210 children can be seated.

She wonders how many coaches will be needed for the 324 children from her school. Remember, each coach can seat only 14 children.

We have to find 324 ÷ 14

No. of children	No. of coaches needed	No. of children remaining
		324
140	10	324 – 140 = 184
140	10	184 – 140 = 44
14	1	44 – 14 = 30
28	2	2

14) 324 (10+10+1+2
−140
184
−140
44
−14
30
−28
2

Total no. of coaches = _____

What do we do with the remaining 2 children? Discuss in grade.

Such remaining number in a division problem is called 'remainder'.

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Let Us Solve

Also, identify remainder (if any) in the division problems.

a) 25 × 34
b) 16 × 43
c) 68 × 12
d) 39 × 13
e) 125 ÷ 15
f) 94 ÷ 11
g) 440 ÷ 22
h) 508 ÷ 18

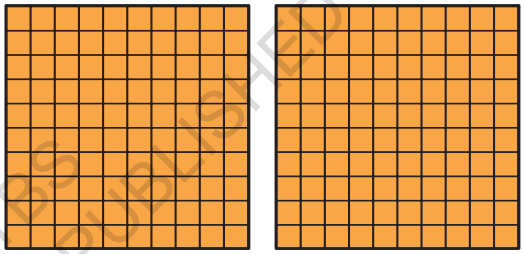
Multiples of 100

2 × 100 = 2 Hundreds = 200

3 × 100 = _____ Hundreds = _____

5 × 100 = _____ = _____

8 × 100 = _____ = _____



10 × 100 = 10 Hundreds = 1000

What happens when we put 10 Hundreds together?



11 × 100 = 11 Hundreds
= 10 Hundreds + 1 Hundred
= 1000+ 100 = 1100

12 × 100 = _____

15 × 100 = _____

20 × 100 = 20 Hundreds = 2000

27 × 100 = _____

70 × 100 = _____

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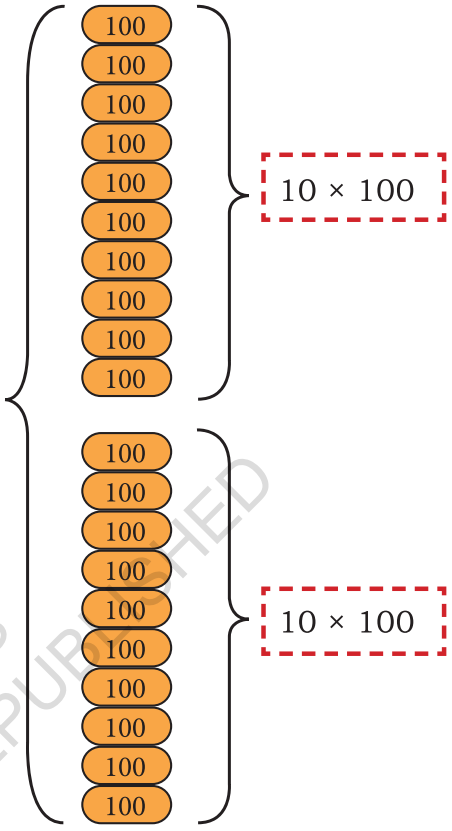
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20 × 100 is
10 × 100 and 10 × 100



10 × 100 is 1000.
So, 20 × 100 is
2 × 1000 = 2000





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Now answer the following questions. Share your thoughts.

30 × 100 = _____ 40 × 100 = _____

50 × 100 = _____ 24 × 100 = _____

53 × 100 = _____ 19 × 100 = _____

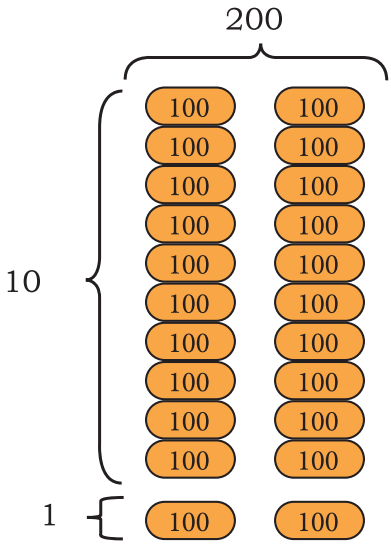
We Know

80 × 100 = 8000

Find

80 × 50 = _____ 40 × 50 = _____

Let us find **11 × 200**





11 × 200 = 10 × 200 and 1 × 200
= 2000 + 200 = 2200



11 × 200 = 11 × 100 and 11 × 100
= 1100 + 1100
= 2200



11 × 200 = 11 × 2 Hundreds
= 22 Hundreds
= 2200

Share what you notice about the answers to these problems.

What do you notice about any number times-100s

11 × 100 = _____ 22 × 100 = _____

11 × 200 = _____ 22 × 200 = _____

Answer the following questions. Share your thoughts.

18 × 100 = _____ 5 × 500 = _____

15 × 200 = _____ 14 × 300 = _____

23 × 200 = _____ 7 × 800 = _____

Note for Teachers: Encourage students to understand the multiplication of a number times-100 by splitting the number of groups in suitable ways. For example, 18 × 100 = 18 Hundreds = 10 Hundreds and 8 Hundreds, that is, 1800. Also, children should be encouraged to see relationships in the answers to two different multiplication problems like the ones above, for example, changing the group size from 100 to 200 or changing the number of groups from 11 to 22.

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Find the answers in Set A. Examine the relationships between the problems and the answers in Set A carefully. Then use this understanding to find the answers in Set B.

A

14 × 100 = _____	14 × 10 = _____	14 × 1 = _____
14 × 500 = _____	14 × 50 = _____	14 × 5 = _____
7 × 500 = _____	7 × 50 = _____	7 × 5 = _____
7 × 250 = _____	7 × 25 = _____	7 × 10 = _____

B

30 × 100 = _____	30 × 10 = _____	30 × 1 = _____
30 × 200 = _____	30 × 20 = _____	30 × 2 = _____
15 × 100 = _____	15 × 10 = _____	15 × 1 = _____
15 × 200 = _____	15 × 20 = _____	15 × 2 = _____

C

Answer the following questions

1) 44 × 10 = _____

22 × 20 = _____

2) 16 × 100 = _____

4 × 400 = _____

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Amala is fascinated to read this information in the aeroplane section of the transport museum.

"During the COVID-19 pandemic, the Indian Government undertook a massive evacuation of Indians living outside the country, under a mission called Vande Bharat. In the first week, 64 flights carried 152 people each."

Note for Teachers: Encourage students to understand the patterns in the above problems. Relationships between doubles and halves and multiplication by 10s and 100s should be pointed out.



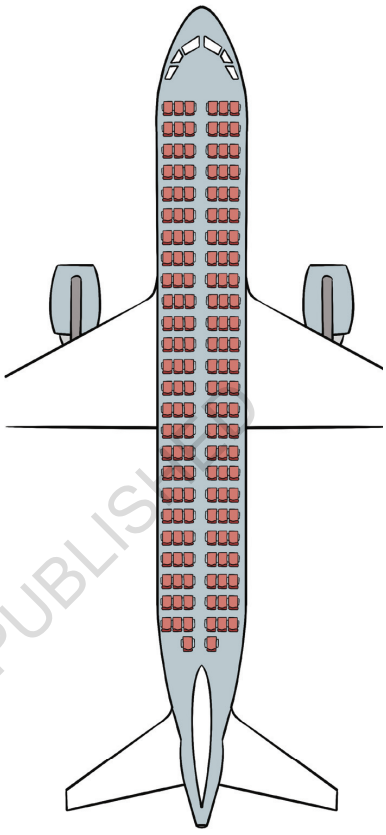
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Amala wonders how many people travelled the first week of this 'Vande Bharat Mission'.

Help her find the answer.

64 × 152

	100	50	2
60	60 × 100 = 6000	60 × 50 = 3000	60 × 2 =120
4	4 × 100 = 400	4 × 50 = 200	4 × 2 = 8



×	100	50	2
60	6000	3000	120
4	400	200	8
	6400	3200	128
			9728

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Farzan notices the famous snake boat from Kerela.

The technique for making these boats is 800 years old. Vallam kali (the snake-boat race) is held during the monsoon season between July and September and concludes with Onam, the harvest festival. These boats are 30 to 35 metres long and can be peddled by 64–128 people.



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In a particular race, 960 participants volunteered. Each boat is pedalled by 64 people. How many boats will be needed?

We have to find **960 ÷ 64**

No. of boats	No. of participants	No. of people remaining
		960
10	640	320
5	320	0

64) 960 (10 + 5
−640
320
−320
0

Total no. of boats: 15

Let Us Solve

Also, identify remainder (if any) in the division problems.

a) 237 × 28
b) 140 × 16
c) 389 × 57
d) 807 ÷ 24
e) 692 ÷ 33
f) 996 ÷ 45

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Dividing by 10 and 100



A farmer packs his rice in sacks of 10 kg each.

a) If he has 60 kg of rice, how many sacks does he need?
b) If he has 600 kg of rice, how many sacks does he need?

If a sack of rice weighs 100 kg then how many sacks does he need for 600 kg of rice?_____

60 ÷ 10 = _____
600 ÷ 10 = _____
600 ÷ 100 = _____

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Find the answers to the following questions. Share your thoughts in grade.

40 ÷ 10 = ____	4 ÷ 2 = ____	400 ÷ 2 = ____
400 ÷ 10 = ____	40 ÷ 20 = ____	400 ÷ 20 = ____
400 ÷ 100 = ____	400 ÷ 200 = ____	400 ÷ 200 = ____

Think and answer. Write the division statement in each case.

1. Manku the monkey sees 870 bananas in the market. Each bunch has 10 bananas. How many bunches are there in the market? _____



2. Rukhma Bi wants to distribute ₹1000/- equally among her 10 grandchildren on the occasion of Eid.
   How much money will each of them get? _____

Let Us Solve

1. The oldest long-distance train of the Indian Railways is the Punjab Mail which ran between Mumbai and Peshawar. Its first journey was on 12 October 1912. Do you know how many coaches it had on its first journey? It had 6 coaches: 3 carrying 96 passengers and 3 for goods.



   a) How many people travelled in each coach on the first journey?

   b) This train has been running for 106 years now. It runs between Mumbai, Maharashtra and Ferozepur, Punjab. It has 24 coaches. Each coach can carry 72 passengers. How many people can travel on this train?

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2. Amala and her 35 classmates, along with 6 teachers, are going on a school trip to Goa. They are using the double-decker "hop on hop off" sightseeing bus to explore the city.



a) 2 people can sit on every seat of the bus. There are 15 seats in the lower deck and 10 in the upper deck. How many seats will they need to occupy? Are there enough seats for everyone?

b) Find the total cost of the tickets for all children.

c) What is the cost of the tickets for all teachers?

Ticket price

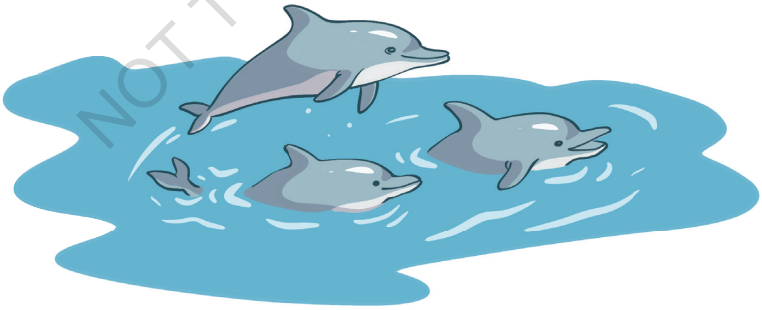
Adult	- ₹899/-
Children	- ₹359/-

3. Kedar works in a brick kiln.

a) The kiln makes 125 bricks in a day. How many bricks can be made in a month?

b) Each brick is sold in the market for ₹ 9. How much money can they earn in a month?

4. Chilika lake in Odisha is the largest saltwater lake in India. It is famous for the Irrawaddy dolphins. Boats can be hired to go see the dolphins. The trip from Puri includes a bus ride followed by a boat ride. Eight people will be going on the trip.



- A bus ticket from Puri to Satapada costs ₹ 60.
- A two-hour boat ride for 8 people costs ₹ 1200.
- How much money do we need to spend on each person?

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5. Find the multiplication and division sentences below. Shade the sentences. How many can you find? Some are done for you.

134	52	30	31	931	10	93	55
5	20	15	15	250	3	33	101
22	1040	450	0	4	26	104	5555
110	100	50	20	1000	60	16	99
44	104	19	3	6	22	132	7
20	6	950	6	6000	30	200	693
808	624	31	14	1200	8	16	24
35	9	525	5	105	62	3200	78

250 × 4 = 1000

50 × 20 = 1000

525 ÷ 5 = 105

_____

_____

_____

_____

_____

_____

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6. Solve

a) 35 × 76

b) 267 × 38

c) 498 × 9

d) 89 × 42

e) 55 × 23

f) 345 × 17

g) 66 × 22

h) 704 × 11

i) 319 × 26

j) 459 ÷ 3

k) 774 ÷ 18

l) 864 ÷ 26

m) 304 ÷ 12

n) 670 ÷ 9

o) 584 ÷ 25

p) 900 ÷ 15

q) 658 ÷ 32

r) 974 ÷ 9

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Chinnu's Coins

1. Five friends plan to visit an amusement park nearby. Each of them uses different notes and coins to buy the ticket. The cost of the ticket is ₹ 750.



- Bujji has brought all notes of ₹ 200.
- And Munna has brought all notes of ₹ 50.
- Whereas Balu has brought all notes of ₹ 20.
- And guess what, Chinnu has all coins of ₹ 5.
- And Sansu has all coins of ₹ 2.

a) Find out how many notes/coins each child has to bring to buy the ticket.

b) Which of these children will not receive any change from the cashier?

c) How long would the cashier take to count Chinnu's coins?

2. Observe the following multiplications. The answers have been provided.

12 × 13 = 156	11 × 14 = 154	13 × 13 = 169	11 × 12 = 132

In each case, do you see any pattern in the two numbers and their product? (Hint: Look at the coloured digits!)

For what other multiplication problems will this pattern hold?

Find 5 such examples.

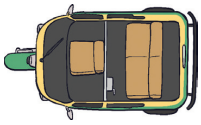
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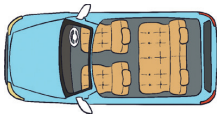
3. Assume each vehicle is travelling with full capacity. How many people can travel in each of these vehicles? Match them up.



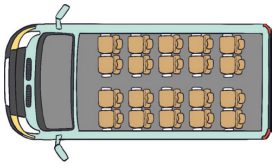
75 Cycles



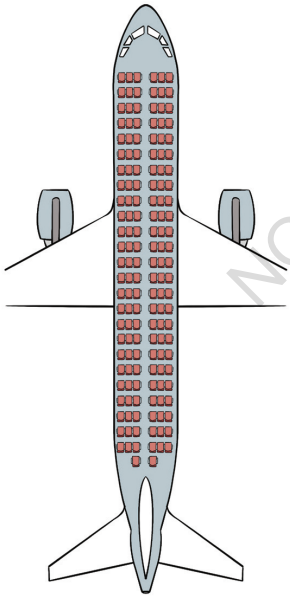
52 Autos



103 Cars

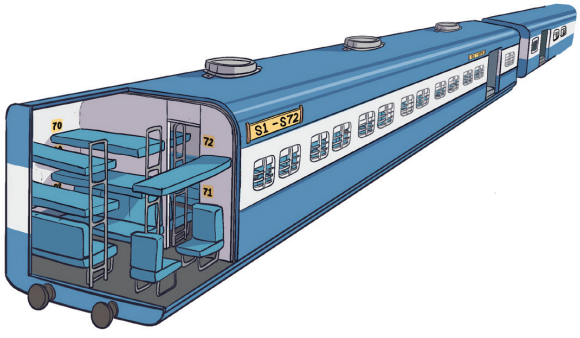


20 Minibus



30 Aeroplanes

15 Train sleeper coaches



400

75

4560

156

864

412

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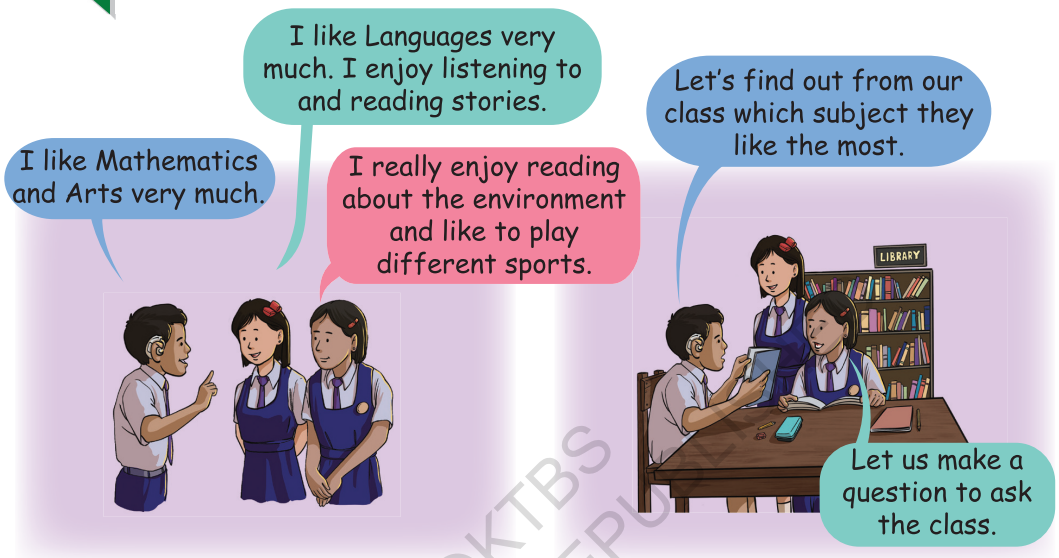
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Chapter 14

Data Handling

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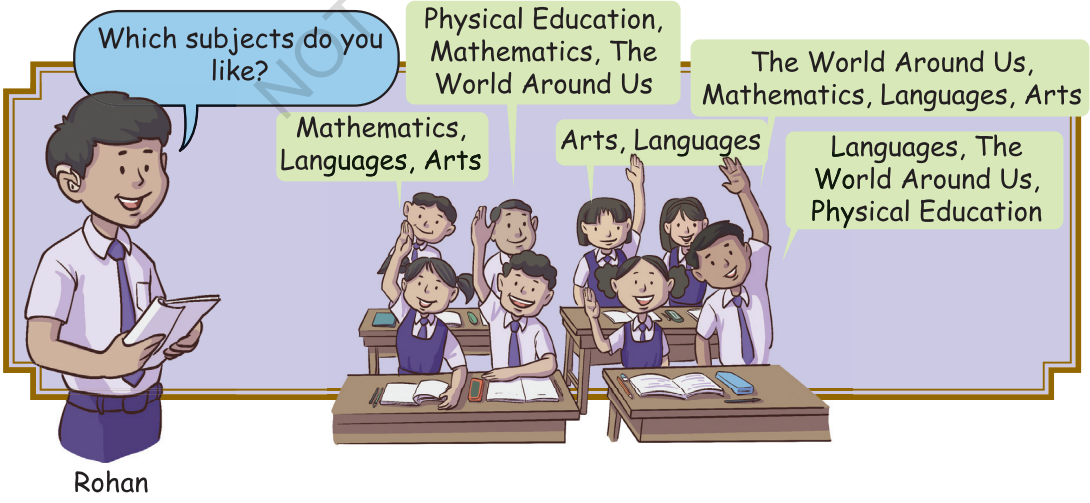


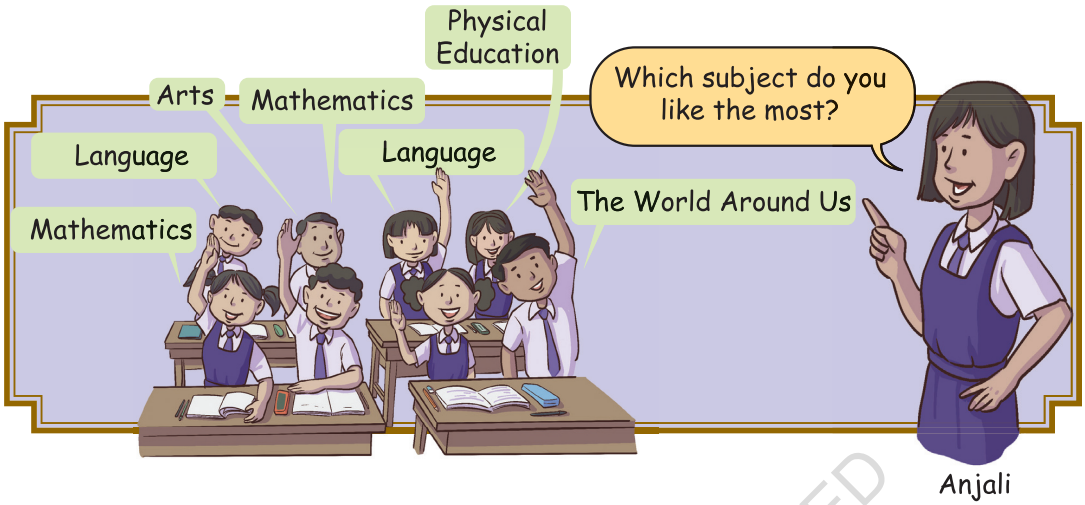


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Look at the questions asked by Rohan and Anjali.

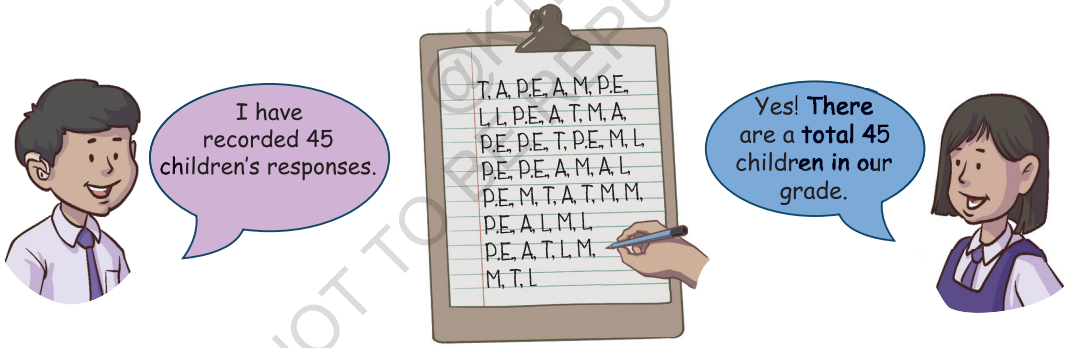
Tick the question that is the most appropriate for finding the 'most liked subject'? Why do you think so? Discuss with your friends and teacher.





Anjali and Rohan recorded the children's answers (responses) to the above question as follows:

They wrote M for Mathematics, L for Languages, T for The World Around Us, A for Arts and P.E. for Physical Education.



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Look at the children's responses above and answer the following questions:

- The number of children who like Mathematics the most is _____ .
- The number of children who like Language the most is _____ .
- The number of children who like The World Around Us the most is _____ .
- The number of children who like Physical Eduation the most is _____ .
- The number of children who like Arts the most is _____ .

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Let's fill the above information in this table.

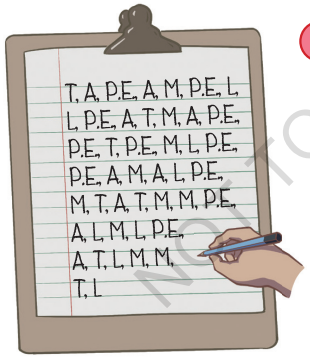
Subjects	No. of Children
Mathematics (M)	_____
Languages (L)	_____
The World Around Us (T)	_____
Physical Education (P.E.)	_____
Arts (A)	_____

Now look at the above table and answer the following questions:

- What is the most common favourite subject among the children?
  _____
- What is the least common favourite subject among the children?
  _____

There are the following two ways to display the information.

1



2

Subjects	No. of Children
Mathematics (M)	_____
Languages (L)	_____
The World Around Us (T)	_____
Physical Education (P.E.)	_____
Arts (A)	_____

Which way of displaying information is easier to understand and why?
_____

Note for Teachers: Discuss how a question needs to be framed and what words should be used.

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Colourful Golas

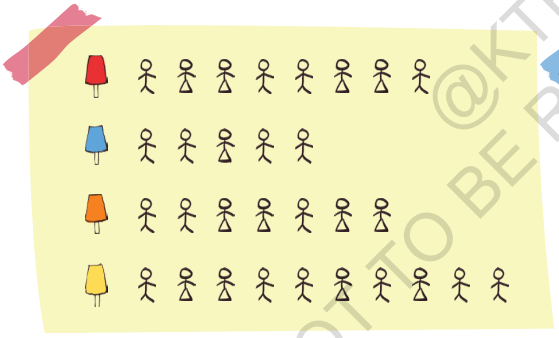
During school lunch break children rush to eat *gola* of their favourite colour.

Rohan and Anjali record the *golas* eaten by different children. They want to eat the one that is most eaten by others.

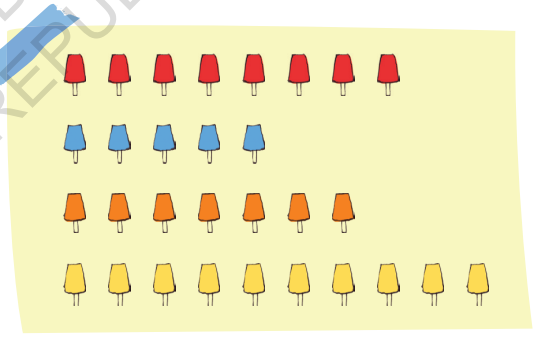
They both start recording the *golas* eaten by the children.



Rohan



Anjali



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Look at the information given above. Colour the line drawing of the golas appropriately.

1. Which colour ice *gola* do the children eat:

   a) the most 

   b) the least 

   How do you know?

2. Which colour *gola* would Anjali and Rohan have bought? 

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3. Which colour *golas did* boys eat the most? 

4. Which colour *golas did* girls eat the most? 

5. Which of the ways of representing data did you use to answer these questions and why?

Activity — Chess or Cricket

Find out from your classmates how many of them play only chess, only cricket, both or neither.

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Now let us organise the above data in the table.

Nature of Games	No. of Girls	No. of Boys
Chess but not Cricket		
Cricket but not Chess		
Both		
Neither		

Answer these questions based on the data collected from your grade.

1. Who plays Chess the most? _____ (Boys/Girls)
2. Who plays Cricket the most? _____ (Boys/Girls)
3. How many children play both types of games? _____

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Bal Mela

Anjali and Rohan have recorded the number of people who ate fruit chaats and sandwiches in the Bal Mela over three days, using a Pictograph.



Anjali: Fruit Chaat

Days	Total Fruit Chaats
Day 1	
Day 2	
Day 3	

Rohan: Sandwiches

Days	Total Sandwiches
Day 1	
Day 2	
Day 3	

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Let Us Do

1. Complete the table.

Items	Total Sold Items
Fruit Chaats	
Sandwiches	

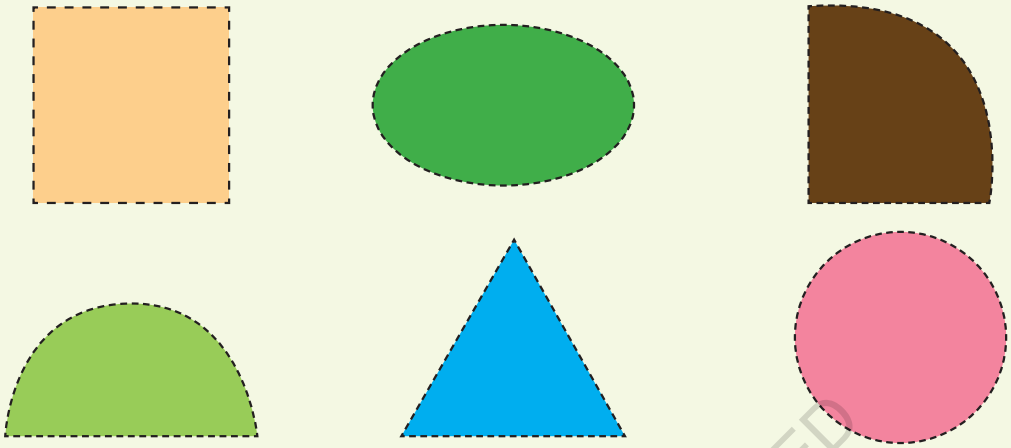
2. On which day were the most sandwiches sold?
3. Which item had the highest sale on Day 2?
4. Complete the table given below. Circle the day that had the highest sales.

Day	Total Sales
Day 1	
Day 2	
Day 3	

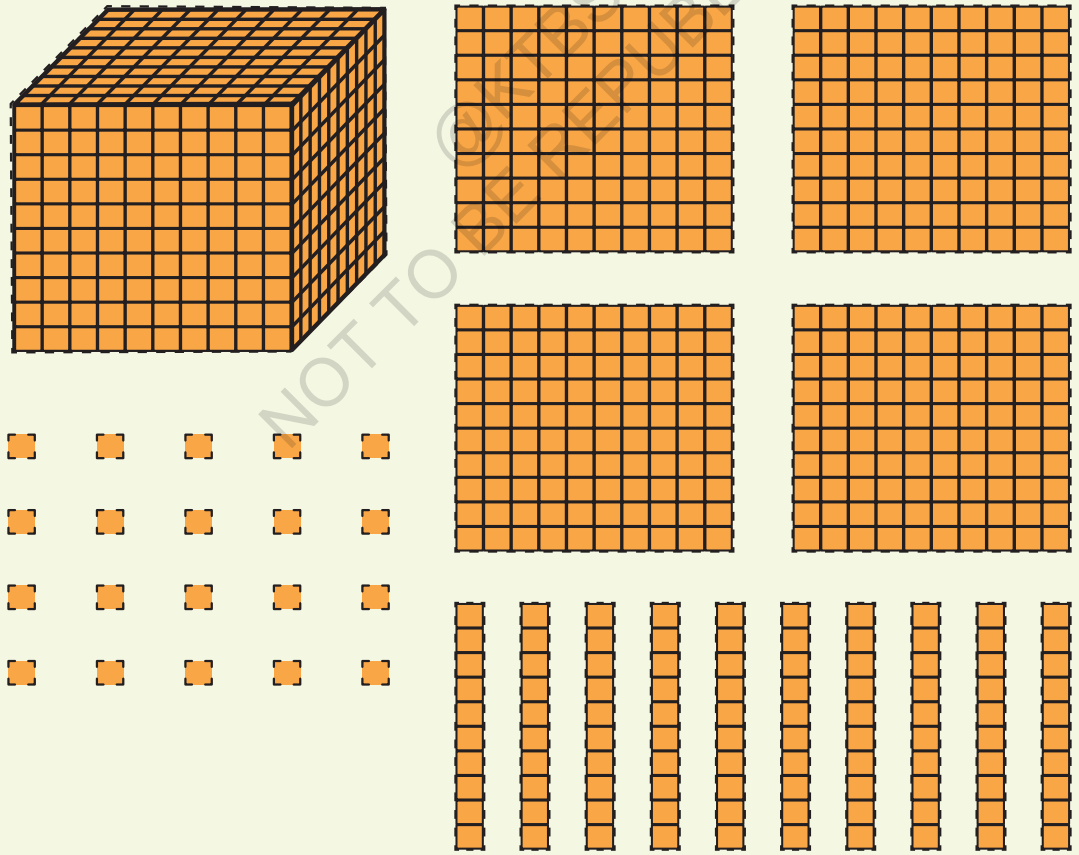
Chapter 14.indd 208 03-04-2025 5.08.05 PM

2D Shapes

Note: Use the shapes given below in Chapter 1



Dienes Blocks



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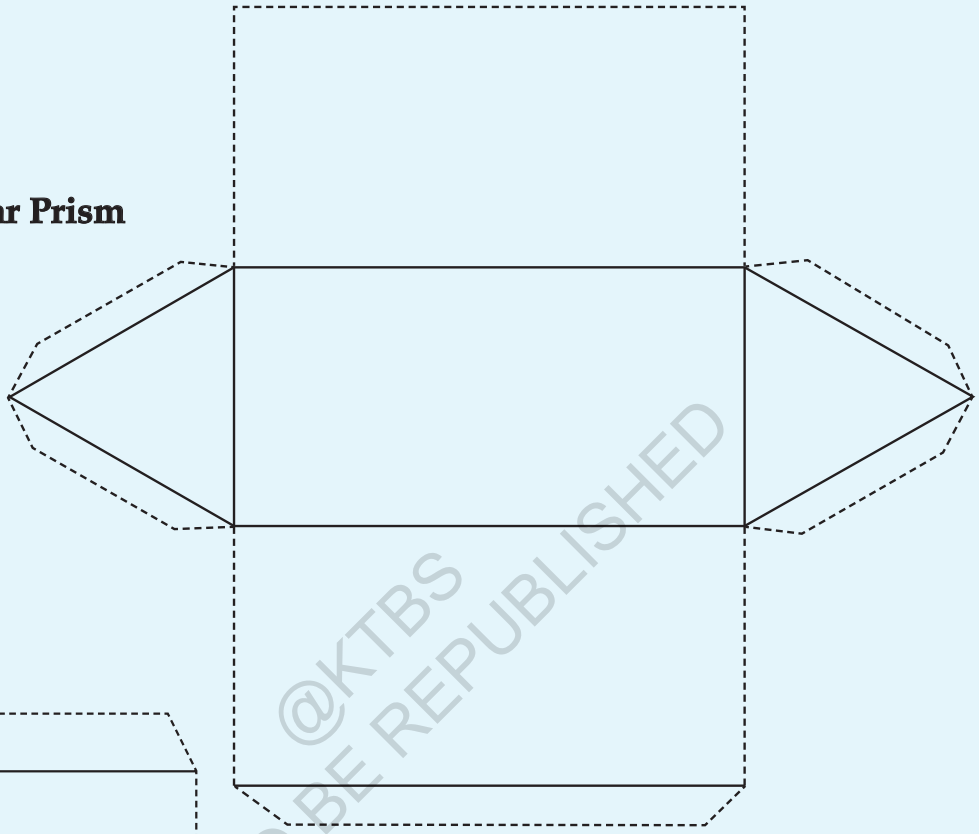
Note: Make more Dienes blocks if needed

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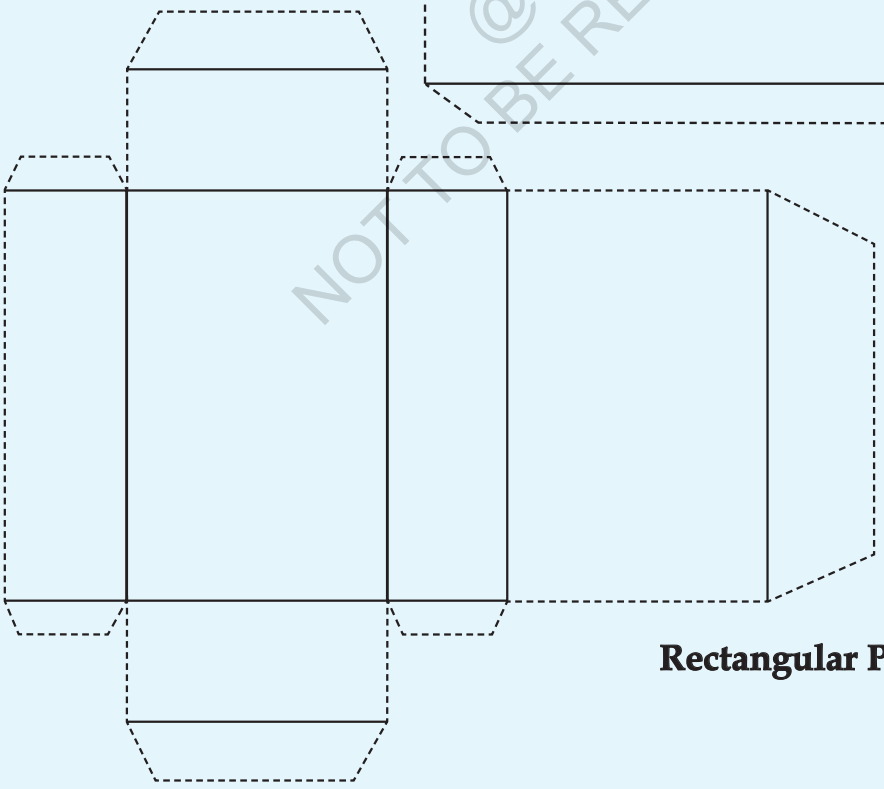
Nets of a Triangular Prism and Rectangular Prism/Cuboid

Note: Cut along the dotted lines and fold along the dark lines.

Triangular Prism



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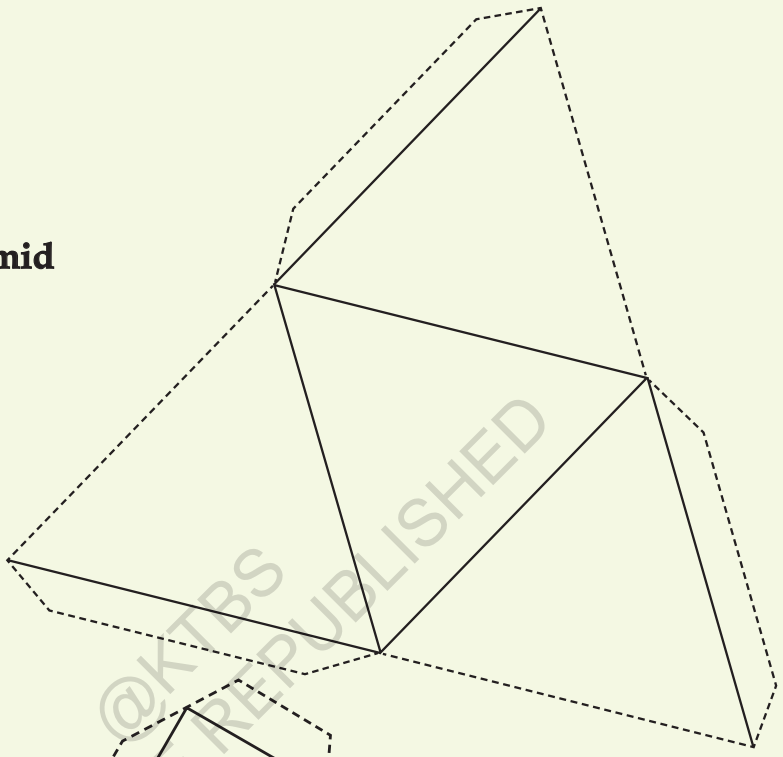
Rectangular Prism/Cuboid

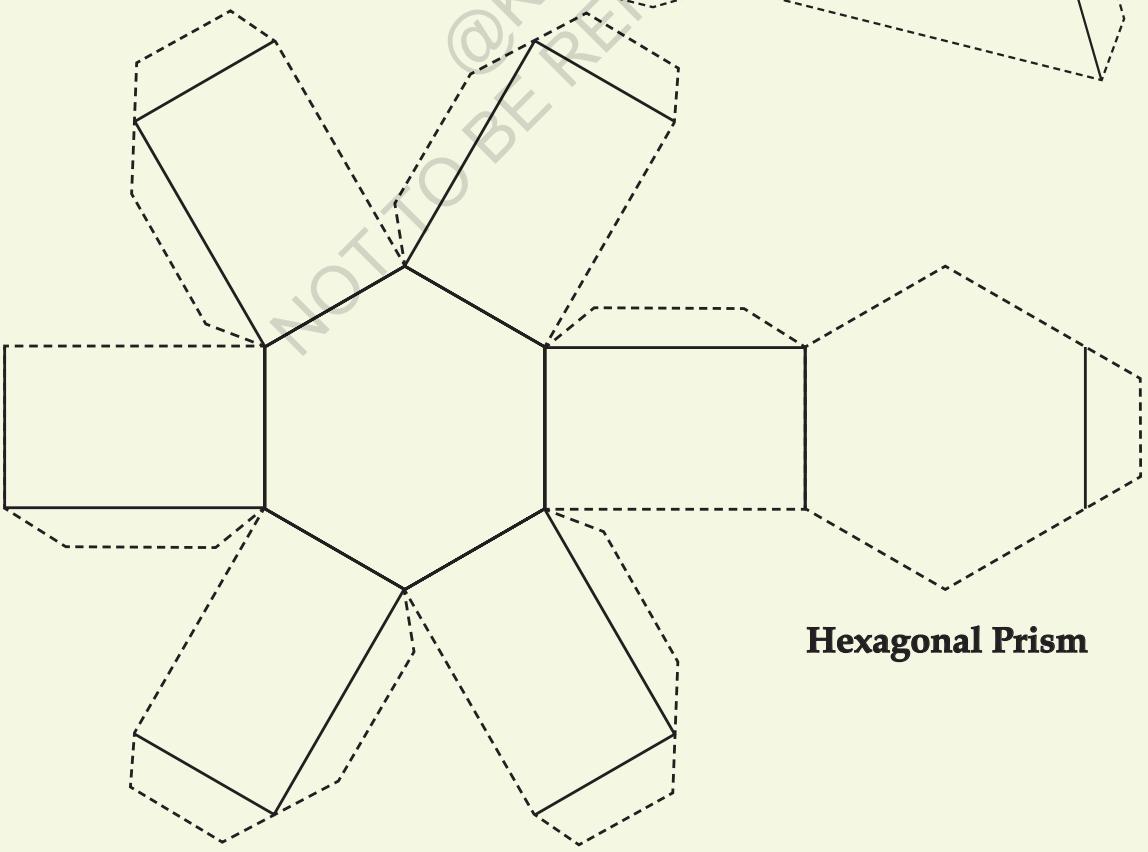
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Nets of a Triangular Pyramid and Hexagonal Prism

Note: Cut along the dotted lines and fold along the dark lines.

Triangular Pyramid





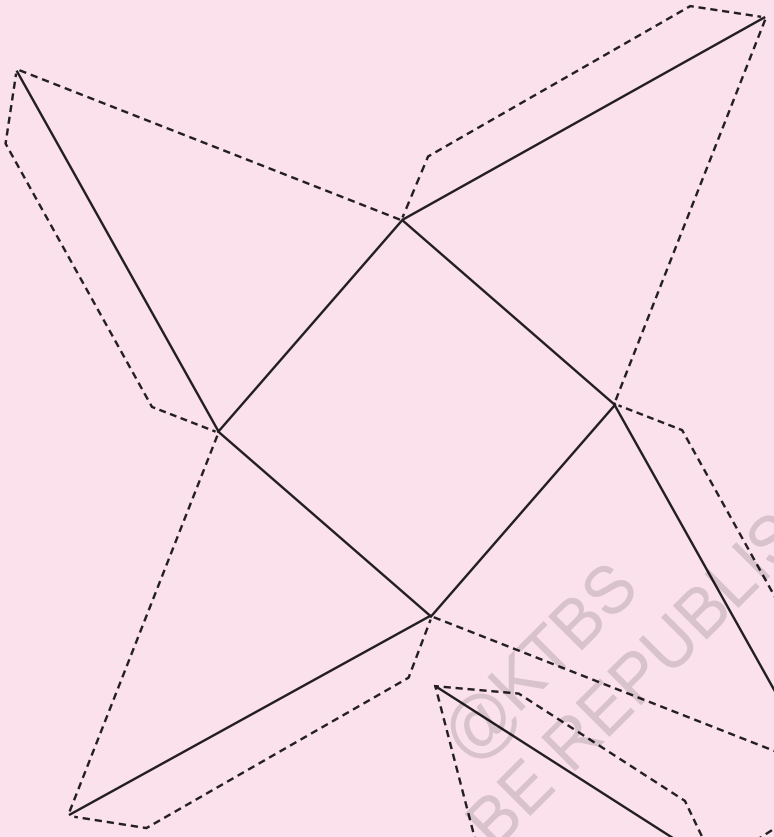
Hexagonal Prism

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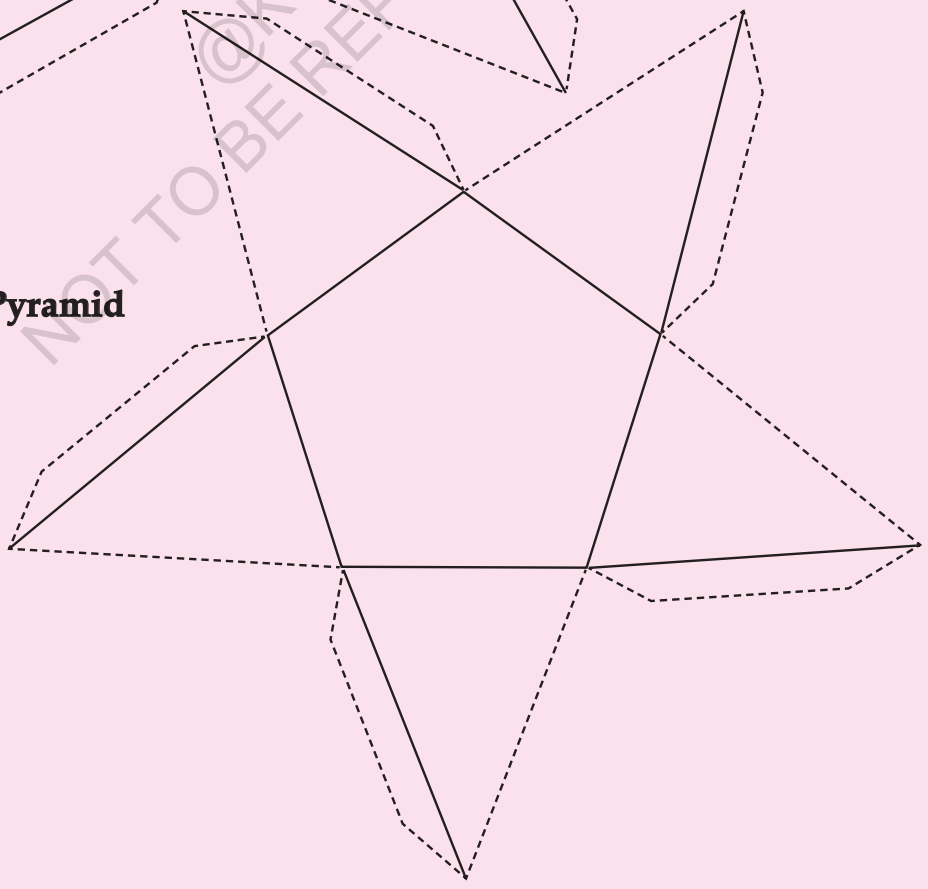
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Nets of a Square Pyramid and Pentagonal Pyramid

Note: Cut along the dotted lines and fold along the dark lines.



Square Pyramid



Pentagonal Pyramid

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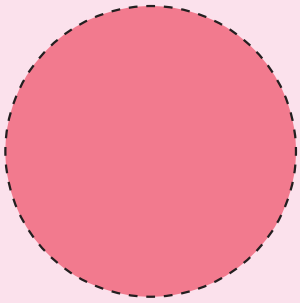
Arrow Cards

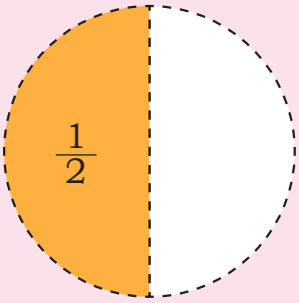
1	1 0	1 0 0	1 0 0 0
2	2 0	2 0 0	2 0 0 0
3	3 0	3 0 0	3 0 0 0
4	4 0	4 0 0	4 0 0 0
5	5 0	5 0 0	5 0 0 0
6	6 0	6 0 0	6 0 0 0
7	7 0	7 0 0	7 0 0 0
8	8 0	8 0 0	8 0 0 0
9	9 0	9 0 0	9 0 0 0

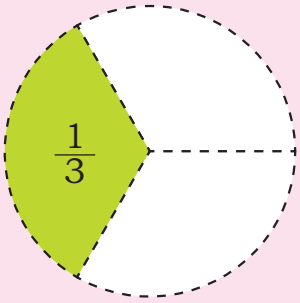
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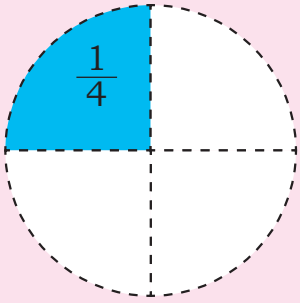
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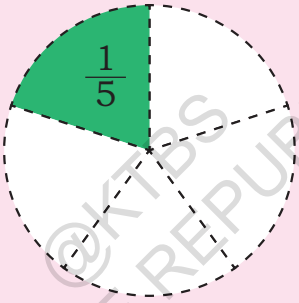
Fraction Kit

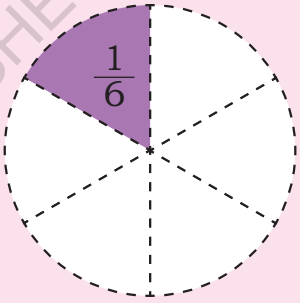


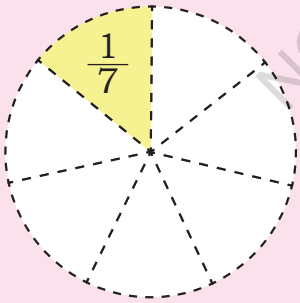


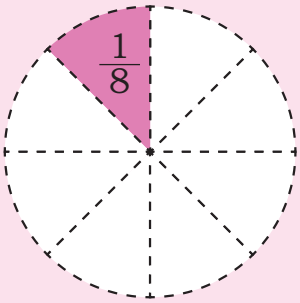


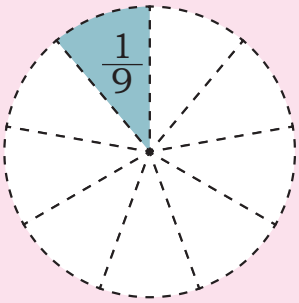






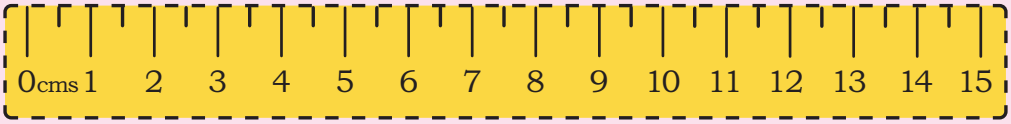






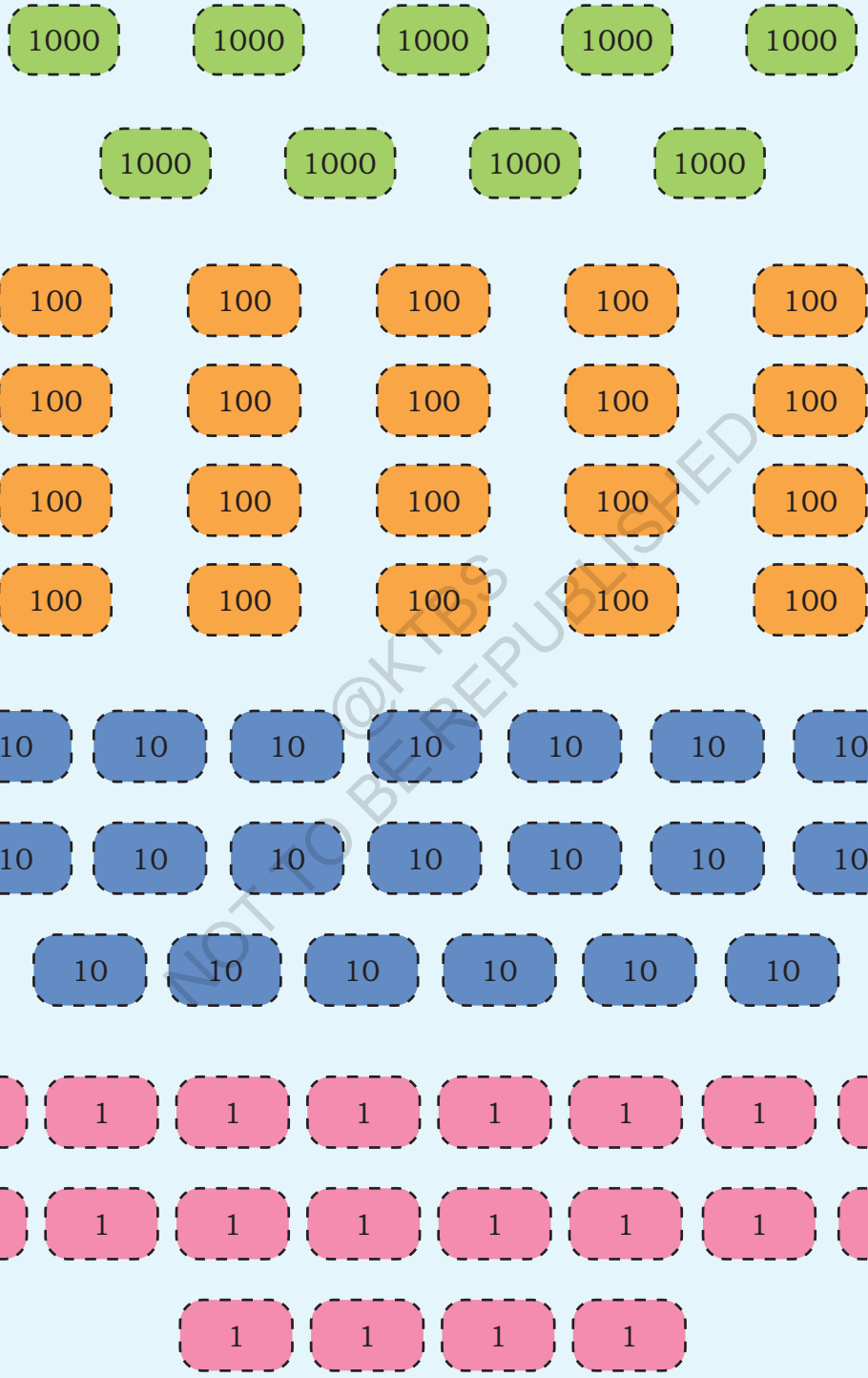
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Cm Scale



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Number Tokens



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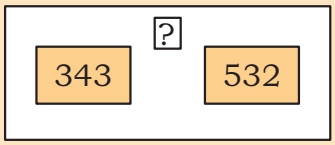
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Note for Teachers

Box diagrams help students decode word problems as well as find strategies to solve them. The following examples are typical of all word problems in addition and subtraction. The operation that needs to be carried out can be decided depending on which boxes are filled in any problem. The three types of problems are combine, compare and change. Each problem can be represented using a slightly different box diagram so that one can capture the problem fully.

Example 1: Combine: Involves two different sets/collections. For example, there are 343 children in the Preparatory Stage and 532 in the Middle Stage in a school. How many total children are there in these two stages?

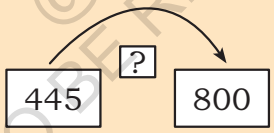
343 + 532 = ?



Example 2: Change: Involves change in an existing set/quantity. For example, I have 445 in my piggy bank. After three months, I ended up with 800 in the bank. How much has the amount in my bank increased in three months?

445 + ? = 800

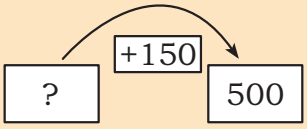
800 – 445 = ?



Example 3: Change: There are some potatoes in Sohan's shop. He bought 150 kg more and now has 500 kg of fresh and old potatoes. How many kg of potatoes did he have initially?

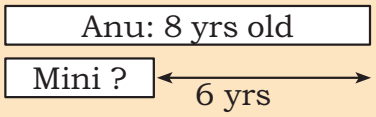
? + 150 = 500

500 – 150 = ?



Example 4: Compare: Involves comparing two quantities. For example, Anu is 6 years older than her sister Mini. Anu is 8 years old now. How old is Mini?

8 = ? + 6



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Note

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