CHAPTER – 9

HALVES AND QUARTERS

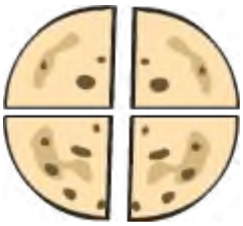
Page No 95:

Question 1: Half-Half If the cats ask you to divide the chapati equally, how will you divide it?

Answer:

Question 2: Half of Half If two more cats come for food, how will you divide one chapati equally for four cats?

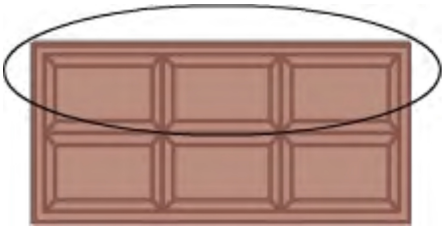
Answer:



Question 3: Half of Many Pieces Rani got a chocolate. She divided it equally and gave half to her friend Reena.

• Circle the portion that Reena got. How many pieces of chocolate are there? _____ How many pieces were left with Rani? _____

Answer:



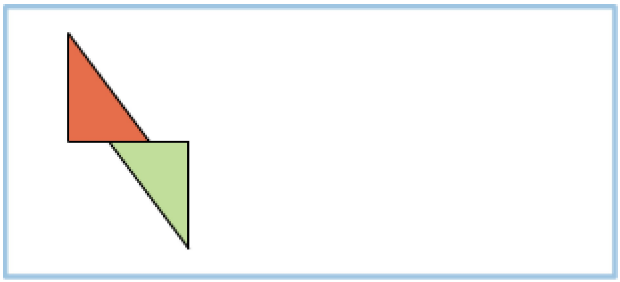
There are 6 pieces of chocolate.

Rani gave half of her chocolate to her friend Reena. Rani was left with the remaining half, that is, 3 pieces.

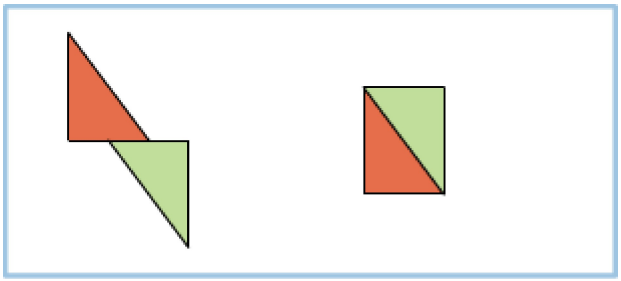
Page No 96:

Question 1:

• Draw different shapes using these triangles. One such shape is shown here.



Answer:

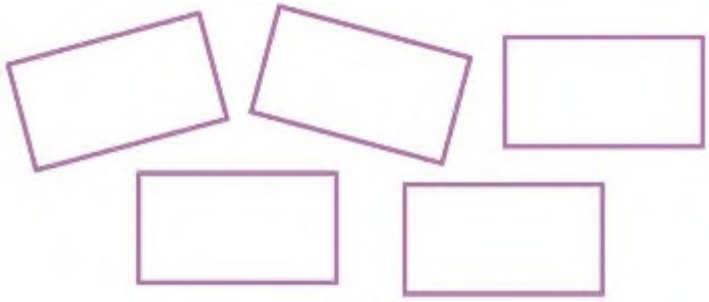


Disclaimer: *The answer may vary from student to student, based on his/her observation. The answer provided here is for reference only.*

Page No 97:

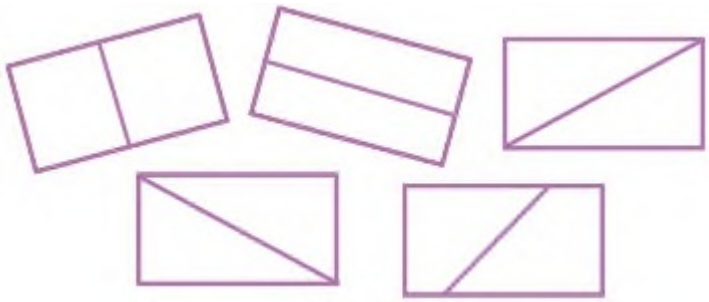
Question 1: In how many different ways can you cut a **rectangle** into half?

• Draw 5 different ways.



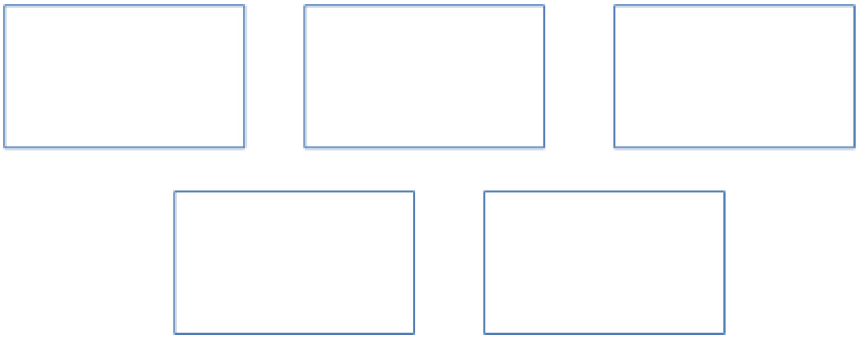
Can you check if they are equal?

Answer:



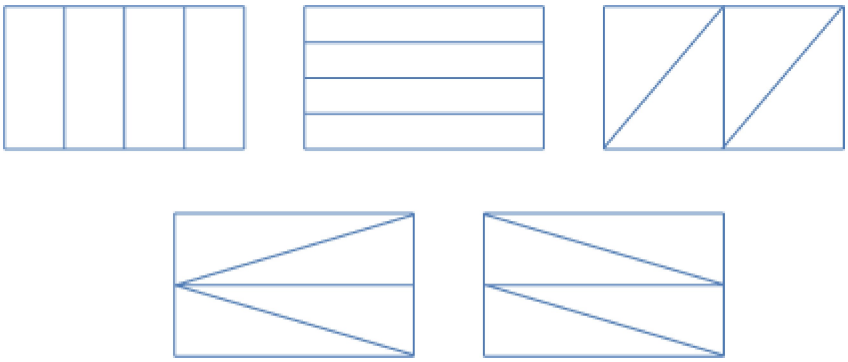
Yes, they are equal.

Question 2: In how many different ways can you cut a rectangle into four equal parts? Draw 5 different ways.



Can you check if they are equal?

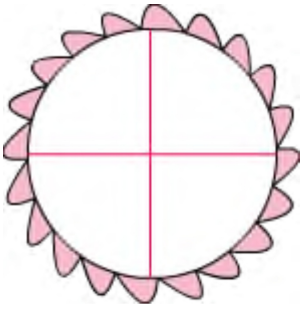
Answer:



Yes, they are equal.

Page No 98:

Question 1: Cutting the Cake Rajni's father brought a cake. She divided the cake into 4 equal parts — for herself, her brother Raju, her father and her mother.

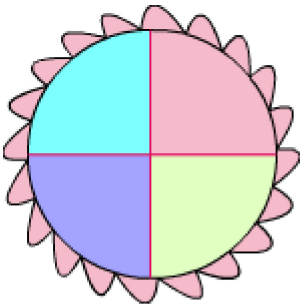


• Colour each share with different colours.

• How much does each get? _____

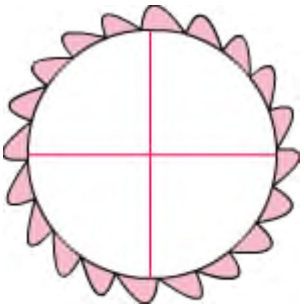
Answer:

•

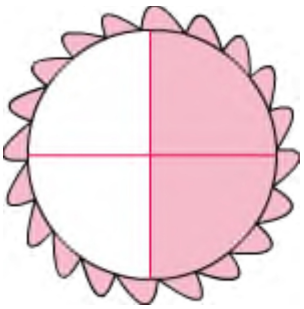


- Each of them gets 14 of the cake.

Question 2: Mother gave her share of cake to Rajni. Now colour the total part that Rajni will get.



Answer:

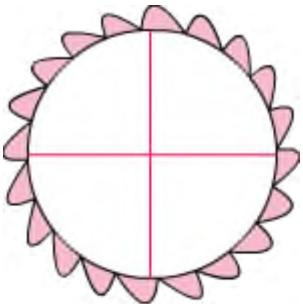


Question 3: Out of 4 parts Rajni will get _____ parts, which is equal to half of the cake. So she can write it as 4 or 12.

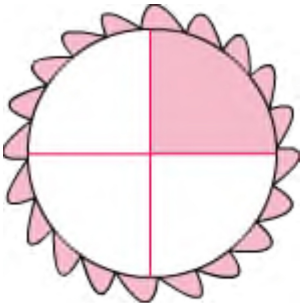
Answer:

Out of 4 parts Rajni will get 2 parts, which is equal to half of the cake. So she can write it as 24 or 12.

Question 4: Colour the share Raju got.

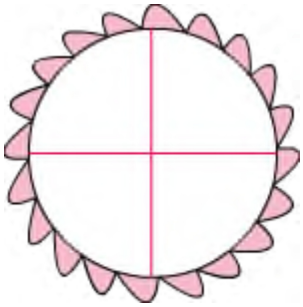


Answer:



Question 5: How much of the cake do Rajni and Raju together get? Colour their total share. Altogether they get 3 parts out of 4, so we can write it as

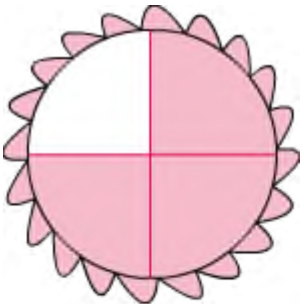
34.



Answer:

Rajni and Raju together get

34 of the total cake.



Page No 99:

Question 1: One day he wants to eat pumpkin *halwa* (sweet dish). He tries to buy a big pumpkin with only Rs 10. He asks the first pumpkin seller the price of a big pumpkin. First pumpkin-seller— 14 of this pumpkin is for Rs 10.

• This full pumpkin will cost Rs _____.

Answer:

Cost of 14 of the pumpkin = Rs 10

∴ Cost of 1 full pumpkin = 4×Rs 10 = Rs 40

This full pumpkin will cost Rs 40.

Question 2: Kundu walks to the next seller and looks for a pumpkin of the same size. Kundu — How much of this pumpkin will I get for Rs 10? Second pumpkin-seller — Half.

• This full pumpkin will cost Rs _____.

Answer:

Cost of 12 of the pumpkin = Rs 10

∴ Cost of the full pumpkin = 2 × Rs 10 = Rs 20

This full pumpkin will cost Rs 20.

Page No 100:

Question 1: Using a Price List

Item	Price in Rs (per kg)
Tomato	8
Potato	12
Onion	10
Carrot	16
Pumpkin	4

(a) How much does 12 kg of tomatoes cost?

(b) Which costs more –12 kg of onions or 14 kg of carrots?

(c) What is the price of 34 kg of potatoes?

(d) Keerthi is going for shopping. She has only Rs 20 with her. Can she buy all the things in her shopping list?

(e) Make two questions yourself from the price list. 1. 2.

Answer:

(a) Cost of 1 kg tomatoes = Rs 8

∴ Cost of 12 kg tomatoes = Rs 8 ÷ 2 = Rs 4

(b) Cost of 1 kg onions = Rs 10 Cost of 1 kg carrots = Rs 16

∴ Cost of 12 kg onions = Rs 10 ÷ 2 = Rs 5 And,

Cost of 14 kg carrots = Rs 16 ÷ 4 = Rs 4 The cost of 12 kg onions is more than the cost of 14 kg carrots.

(c) Cost of 1 kg potatoes = Rs 12

Cost of 14 kg carrots = Rs 12 ÷ 4 = Rs 3

∴ Cost of 34 kg potatoes = Rs 3 × 3 = Rs 9

(d) Keerthi has Rs 20. Her shopping list includes 12 kg potatoes, 2 kg pumpkins and 14 kg carrots.

Cost of 12 kg potatoes = Rs 12 ÷ 2 = Rs 6

Cost of 2 kg pumpkins = Rs 2 × 4 = Rs 8

Cost of 14 kg carrots = Rs 16 ÷ 4 = Rs 4

Total cost of all vegetables = Rs 6 + Rs 8 + Rs 4 = Rs 18

Keerthi can purchase all the vegetables in her shopping list, as she has Rs 20.

(e) 1. How much pumpkin can she buy with the total money? 2.

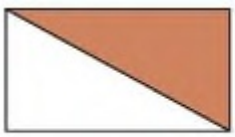
What will be the cost of 2 kg onions?

Disclaimer: *It is highly recommended that the students prepare the sample questions on their own.*

Page No 101:

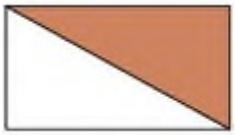
Question 1: Practice Time

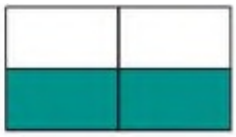
What part of the whole is coloured? Write below each shape.



_____ _____

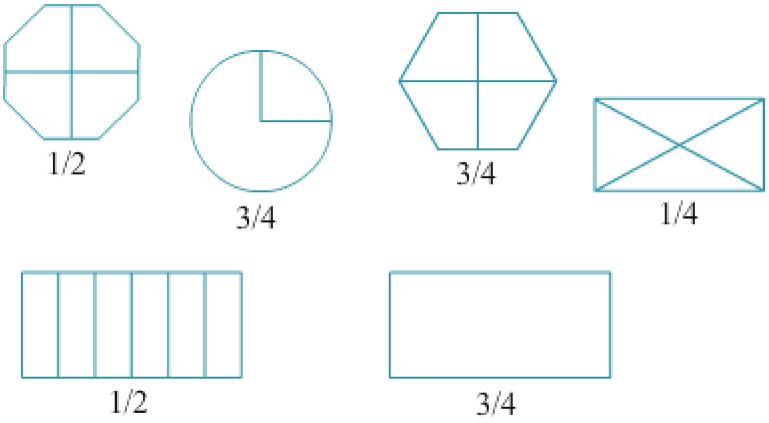
Answer:



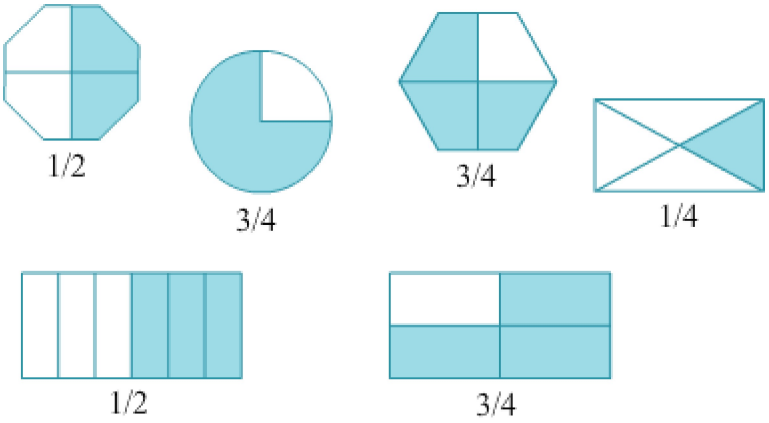


12 24

Question 2: Practice Time Colour that part of the shape which is written below.



Answer:

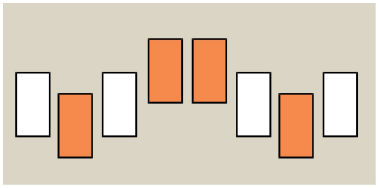


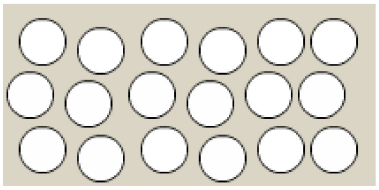
Question 3: ***Cut in half*** Draw a line which divides these shapes into half.

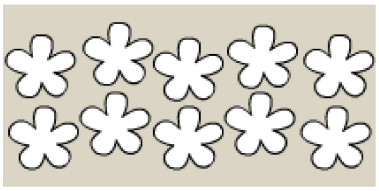
Answer:

Page No 102:

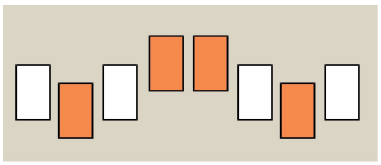
Question 1: Colour half the number of shapes as shown here.

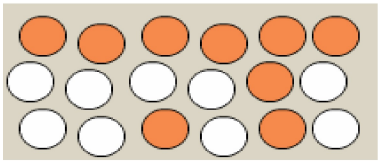


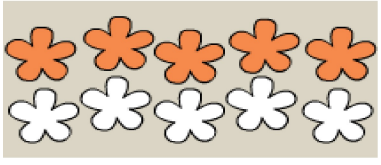




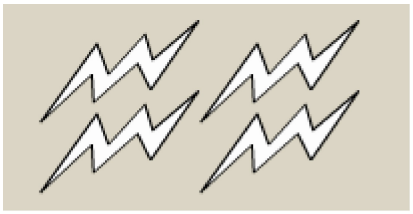
Answer:

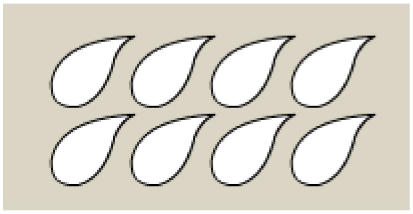


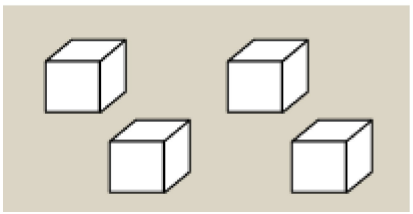




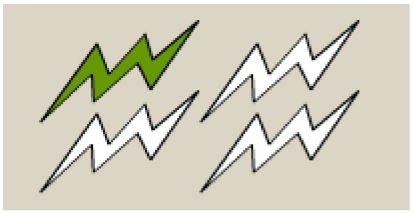
Question 2: Colour 14 of these shapes.

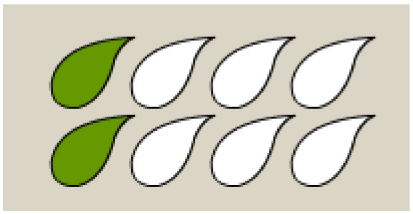


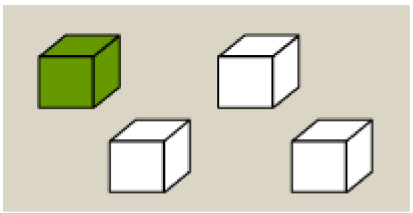




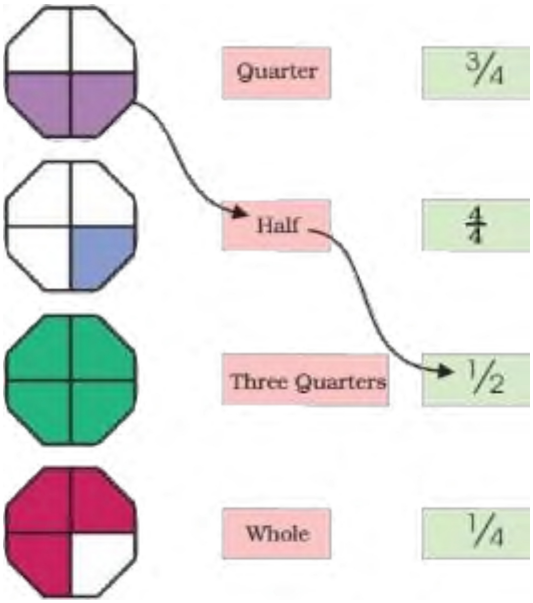
Answer:



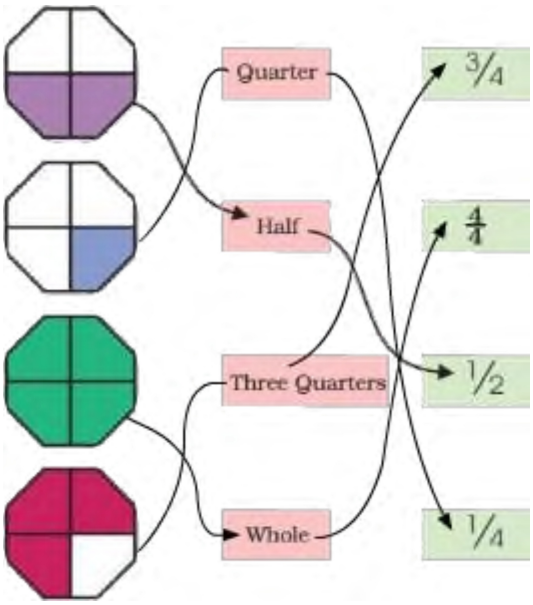




Question 3: Match the coloured part as shown.



Answer:



Page No 103:

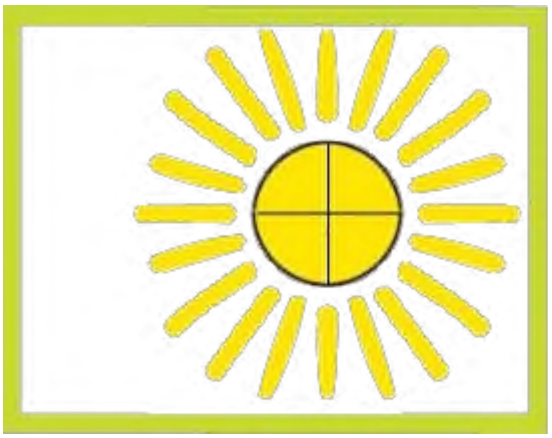
Question 1: ***Make the other half***

12 of the picture is drawn here. Can you complete the picture by drawing the other half?

Answer:

Question 2: This is a quarter of a picture. Can you complete it? How many more quarters will you draw to complete it? _____

Answer:



Three more quarters are required to complete the picture.

Question 3: Half and Quarter of a Metre

Using your metre scale, cut a string of one metre.

• On this string, mark the length 12 metre, 14 metre and 34 metre.

• Using your string, draw a line of length 12 metre on the floor. How many centimetres long is the line? _____ Remember, 1 metre = 100 cm So

12 metre = ……. cm

14 metre = ……. cm

34 metre = ……. cm

Can you see that when we add 12 and 14 we get 34?

Answer:

1 m = 100 cm Line of

12m on the floor = 100 cm ÷ 2 = 50 cm So, a line of

12m on the floor is 50 cm long.

12m = 100 cm ÷ 2 = 50 cm

14m = 100 cm ÷ 4 = 25 cm

34m = 25 cm × 3 = 75 cm

Disclaimer: *Students are advised to do the activity by themselves.*

Page No 104:

Question 1: Sharing Milk This bottle is full of milk and it holds one litre. The milk is put into 4 other bottles so that each bottle has 14litre of milk.

• Shade the bottles to show the level of milk in each.

Remember, 1 litre = 1000 millilitres

• How many millilitres of milk does each bottle have? _____

Answer:

- 1 litre = 1000 millilitres

Each bottle contains 14 litre of milk.

Thus, Quantity of milk in each bottle = 1000 mL ÷ 4 = 250 mL

Thus, each bottle contains 250 mL milk.

Question 2: Sharing Milk Shan poured 1 litre of milk into two bottles so that the first bottle holds 34 litre and the other holds 14 litre.

• Shade the level of milk in each bottle.

• How many millilitres of milk does each bottle hold?

Answer:

-

- 1 litre = 1000 millilitres

One of the bottle holds 14L milk.

Thus, Quantity of milk = 1000 mL ÷ 4 = 250 mL Another bottle holds 34L milk.

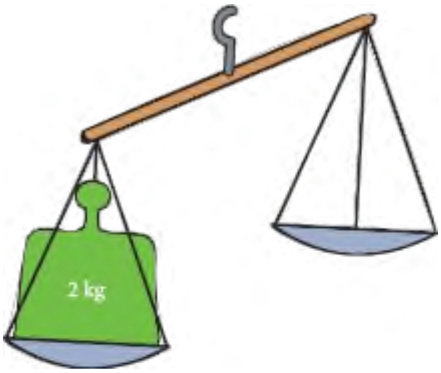
Thus, Quantity of milk = 250 mL × 3 = 750 mL

Page No 105:

Question 1: Balance the Weight

• Choose from the weights above to make the two pans equal. In how many ways can you do it?

(a) Draw the weights in the empty pan. Remember, 1kg = 1000 g



Answer:

We know 1 kg = 1000 g Thus, 2 kg = 2 ×1000 g = 2000 g

Following are the different ways in which we can make the two weights equal.

1) 1 kg + 500 g + 500 g = 2000 g

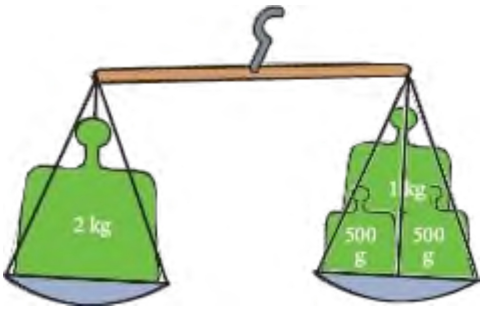
2) 1 kg + 500 g + 250 g + 250 g = 2000 g

3) 1 kg + 500 g + 250 g + 200 g + 50 g = 2000 g

4) 1 kg + 500 g + 200 g + 200 g + 100 g = 2000 g

5) 1 kg + 250 g + 250 g + 250 g + 200 g + 50 g = 2000 g

We can make five different combinations to get 2 kg weight.



Disclaimer: *The answer may vary from student to student. The answer provided here is for reference only.*

Question 2: Balance the Weight

In how many different ways can you balance this weight of 34kg?

(1) …… (2) …… (3) ……

Answer:

We know 1 kg = 1000 g

Thus, 14kg = $1000 \div 4 = 250$ g

34kg $= 250 \text{ g} \times 3 = 750$ g

Following are the different ways in which we can balance the weight of 34 kg:

1) 500 g + 200 g + 50 g = 750 g

2) 250 g + 250 g + 250 g = 750 g

3) 250 g + 250 g + 200 g + 50 g = 750 g

Page No 106:

Question 1: Practice Time

• There are 60 mangoes 12 of them are ripe. How many mangoes are ripe?

• There are 32 children 12 of them are girls. How many children are boys?

• There are 20 stars. A quarter of them are red. How many stars are red? How many are not red?

• Ravi wants a pencil. It costs Rs 2. He gives a one-rupee coin, one half-rupee coin and one quarter-rupee coin. Is it enough?

Answer:

- Total mangoes = 60 12 of them are ripe.

  Number of ripe mangoes = 60 ÷ 2 = 30 30 out of 60 mangoes are ripe.

- Total children = 32 12 of them are girls. So, 12 of them are boys.

  Number of boys = 32 ÷ 2 = 16 16 out of 32 children are boys.

- Total stars = 20 Quarter of them are red, which means 14 of them are red.

  Number of stars that are red = 20 ÷ 4 = 5 5 out of 20 stars are red.

  Number of stars that are not red = 20 − 5 = 15

- Cost of a pencil = Rs 2

  Money given by Ravi = Rs (1 + 0.50 + 0.25) = Rs 1.75

But, the pencil is for Rs 2.

Money required = Rs (2.00 − 1.75) = Rs 0.25

Ravi did not give enough money to buy the pencil.

Rs 0.25 more is required to buy the pencil.