

KENDRIYA VIDYALAYA, GANDHIGRAM, DINDIGUL

SUBJECT: MATHS

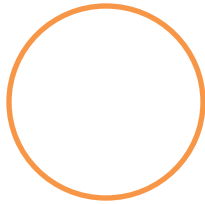
TITLE: HALVES AND QUARTERS (NOTES)

CLASS:IVMONTH: NOVEMBER

Two equal parts of any things are called as HALVES. We can write Half as $\frac{1}{2}$. It means 1 part of 2.

We can write Quarter as $\frac{1}{4}$. It means 1 part of 4.

See this circle:



- This is a Whole Circle.



- This is a Half Circle.

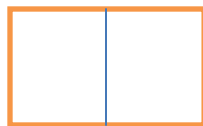


- This is a Quarter portion of a Circle.

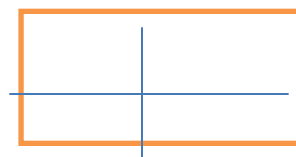
See this Rectangle:



This is a whole Rectangle.



- This is Half part of a Rectangle.



-This is one-fourth of a Rectangle.

Half of many pieces:

1.) Rani got a chocolate .She divided it equally and gave half to her friend Reena.



i.) How many pieces of chocolate are there?

Ans: There are 6 pieces of chocolate.

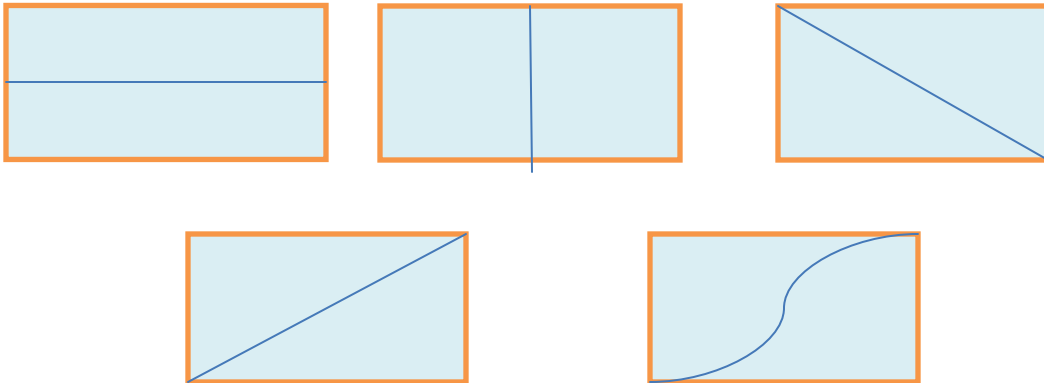
ii.) How many pieces were left with Rani?

Ans: There are three pieces of chocolate left with Rani.

2.) In how many different ways can you cut a Rectangle into Half? Draw 5 different ways:

Ans: Five different ways to cut a rectangle is as follows:

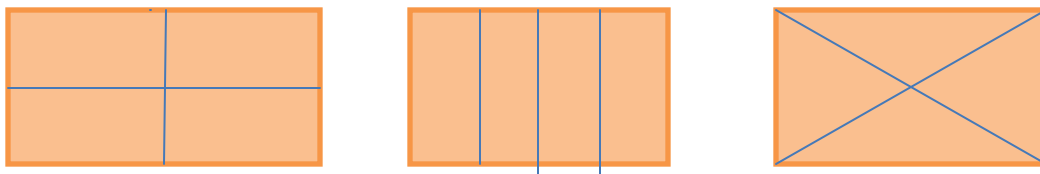
Each part of rectangle exactly coincides with the other part,so two parts equal.

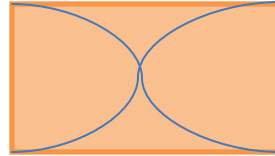
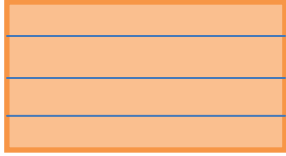


3.) In how many different ways can you cut a Rectangle into four equal parts?

Draw 5 different ways:

Ans: Cutting of a rectangle in four equal parts is shown in the figures given here.As each part exactly coincides with the each of the remaining three parts,so they are equal.

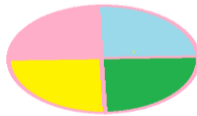




Cutting the cake:

Rajini's father brought a cake. She divided the cake into 4 equal parts- for herself, her brother Raju, her father and her mother.

- i.) Colour each share with different colours:



- ii.) How much does each get?

Ans: Each person gets $\frac{1}{4}$ of the cake.

- iii.) Mother gave her share of cake to Rajini. Now colour the total part that Rajini will get.

Ans: By this way, Rajini got = Her share + Her mother's share
 $= \frac{1}{4} + \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$ part of the cake.

- iv.) Out of 4 parts Rajini will get _____ parts, which is equal to half of the cake.

Ans: out of 4 parts Rajini will get 2 parts.

Greedy Gundu:

- i.) First Pumpkin seller sells $\frac{1}{4}$ of this pumpkin for Rs.10. This full pumpkin will cost Rs._____.

Ans: The cost of $\frac{1}{4}$ pumpkin = Rs.10

Therefore, cost of one pumpkin = Rs.10 $\frac{1}{\frac{1}{4}}$

$$= \text{Rs. } 10 \times \frac{4}{1} = \text{Rs. } 40$$

ii.) How much of the pumpkin will kundu get for Rs.10. Second pumpkin seller sells as Half of that whole pumpkin. This whole pumpkin will cost Rs._____

Ans: The cost of half pumpkin is Rs.10.

Therefore, the cost of full pumpkin = Rs.10+ Rs.10 = Rs.20.

Using a Price list:

ITEM	PRICE IN RS(PER KG)
Tomato	8
Potato	12
Onion	10
Carrot	16
Pumpkin	4

i.) How much does $\frac{1}{2}$ kg of tomatoes cost?

Ans: The cost of 1 kg of tomato = Rs.8

Therefore, the cost of $\frac{1}{2}$ kg tomato = $\frac{8}{2}$ = Rs.4.

ii.) Which costs more ? ($\frac{1}{2}$ kg of onions or $\frac{1}{4}$ kg of carrots)

Ans: The cost of $\frac{1}{2}$ kg of onion = cost of 1 kg of onion/2
 $= \frac{10}{2}$ = Rs.5

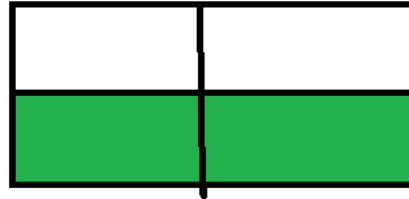
The cost of $\frac{1}{4}$ kg of carrot = cost of 1 kg of carrot/4
 $\frac{16}{4}$ = Rs.4.

iii.) What is the price of $\frac{3}{4}$ kg of potatoes?

Ans: The cost of 1 kg of potatoes = Rs.12

Therefore, the cost of $\frac{3}{4}$ kg of potatoes = $12 \times \frac{3}{4}$
 $= \frac{36}{4}$ = Rs.9.

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

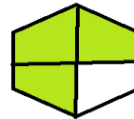


Half $1/2$ Half $2/4 = 1/2$

2.) Colour that part of the shape which is written below:

i.) $1/4$

ii.) $3/4$

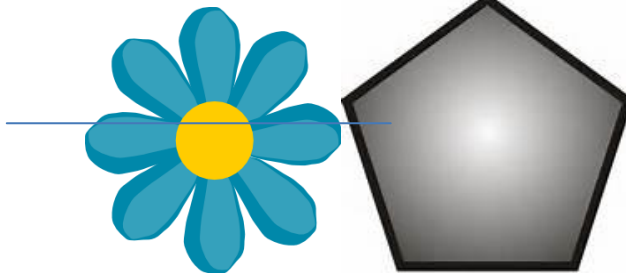


3.) Cut in half:

Draw a line which divides these shapes into half:

i.)

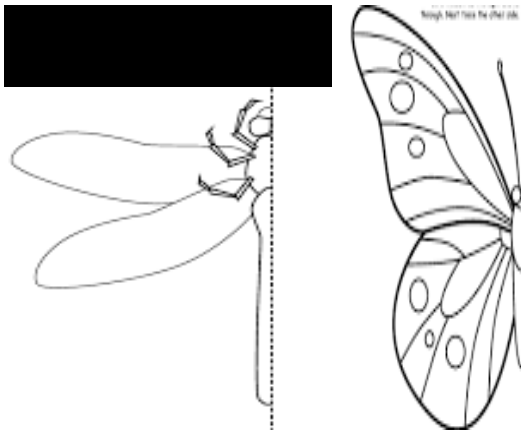
ii.)



4.) Match the coloured part as shown:

- | | | |
|----------------------|--------------|----------------|
| i.) Quarter | → | 3/4 |
| ii.) Half | → | 4/4 |
| iii.) Three quarters | → | 1/2 |
| iv.) Whole | → | 1/4 |

5.) Make the other half:



MEASUREMENT UNITS:

$1\text{Kg} = 1000\text{g}$

$1/2 \text{ kg} = 500\text{g}$

HINT: Kg means Kilogram

$1/4 \text{ kg} = 250\text{g}$ means Gram

$1 \text{ m} = 100 \text{ cm}$

L means Litre

ML means Millilitre

$1/2 \text{ m} = 50 \text{ cm}$

M means Metre

$1 \text{ L} = 1000 \text{ ml}$

Cm means Centimetre

$1/2 \text{ L} = 500 \text{ ml}$

Balance the weight:

1.) In how many ways can you make the two pans equal?

Ans: This can be done in different ways.

i.) $1 \text{ kg} + 500\text{g} + 500\text{g}$

ii.) $1\text{kg} + 500\text{g} + 250\text{g} + 250\text{g}$

iii.) $1\text{kg} + 500\text{g} + 200\text{g} + 200\text{g} + 100\text{g}$

iv.) $1\text{kg} + 250\text{g} + 250\text{g} + 250\text{g} + 200\text{g} + 50\text{g}$

v.) $1\text{kg} + 200\text{g} + 200\text{g} + 100\text{g} + 500\text{g}$.

2.) In how many ways can you balance the weight of $\frac{3}{4}$ kg?

Ans: $\frac{3}{4}$ kg = 1000g $\times \frac{3}{4}$ = 750g

i.) $250\text{g} + 250\text{g} + 250\text{g} = 750\text{g}$

ii.) $250\text{g} + 250\text{g} + 200\text{g} + 50\text{g} = 750\text{g}$

iii.) $500\text{g} + 250\text{g} = 750\text{g}$

3.) There are 60 mangoes. $\frac{1}{2}$ of them are ripe. How many mangoes are ripe?

Ans: Total number of mangoes = 60

Half of them are ripe.

Therefore, number of ripe mangoes = $\frac{1}{2} \times 60 = 30$ mangoes.

Hence, 30 mangoes are ripe.

4.) There are 20 stars. A quarter of them are red. How many Stars are red? How many stars are not red?

Ans: Total number of stars = 20

$\frac{1}{4}$ of them are red, Therefore, number of red stars = $\frac{1}{4} \times 20 = 5$.

Number of red stars = 5

Number of stars which are not red = $20 - 5 = 15$.

5 stars are red while 15 stars are not red.