1. Convert the following percents into fractions in simplest form:

(i) 25%

Solution:-

25% is written in the form for fraction as = 25/100

= ¼

(ii) 150%

Solution:-

150% is written in the form for fraction as = 150/100

= 15/10

= 3/2

(iii) 7½%

Solution:-

First concert the mixed fraction into improper fraction,

7½%= (15/2)%

Then, (15/2)% is written in the form for fraction as = (15/2)/100

= (15/(2 x 100))

= 15/200

= 3/40

(iv) $33\frac{1}{3}$ **%**

Solution:-

First concert the mixed fraction into improper fraction,

$33\frac{1}{3}$ **%** = (100/3)%

Then, (100/3)% is written in the form for fraction as = (100/3)/100

= (100/(3 x 100))

= 1/3

(2) Convert the following fractions into percents:

(i) 1/8

Solution:-

1/8 is converted into percent as,

= (1/8)/100
= (1/8) x 100
= 12.5%

(ii) 5/4
Solution:-
5/4 is converted into percent as,
= (5/4)/100
= (5/4) x 100
= 5 x 25
= 125%

(iii) 9/16
Solution:-
9/16 is converted into percent as,
= (9/16)/100
= (9/16) x 100
= 56¼ %

(iv) 3/7
Solution:-
3/7 is converted into percent as,
= (3/7)/100
= (3/7) x 100
= $42\frac{6}{7}$%

(v) 11/15
Solution:-
11/15 is converted into percent as,
= (11/15)/100
= (11/15) x 100
= $73\frac{1}{3}$%

(vi) $1\frac{3}{8}$**%**
Solution:-
Convert the mixed fraction into improper fraction we get,

11/8
11/8 is converted into percent as,
= (11/8)/100
= (11/8) x 100
= 137.5%

3.
(i) 6 students out of 40 students in a class are absent. What percentage of the students are absent?
Solution:-
From the question it is given that,
Total number of students in the class is 40
Number of students were absent = 6
Then, percentage of the students are absent = (6/40) x 100
= 0.15 x 100
= 15%

(ii) Antony secured 384 marks out of 500 marks. Find the percentage of marks secured by Antony.
Solution:-
From the question it is given that,
Antony secured 384 marks
Maximum marks = 500 mark
Then, the percentage of marks secured by Antony = (384/500) x 100
= 0.768 x 100
= 76.8%

(iii) A shop has 500 shirts, out of which 15 are defective. What percentage of shirts are defective?
Solution:-
Total number of shits that shop has = 500
Number of defective shirts = 15
Then, percentage of shirts are defective = (15/500) x 100
= 0.03 x 100
= 3%

(iv) Vani has a collection of bangles. She has 20 gold bangles and 10 silver bangles.

What is the percentage of each type of bangles?

Solution:-

From the question it is given that,

Vani has a collection of bangles

Number of gold bangles = 20

Number of silver bangles = 10

Total number of bangles she has = 20 + 10 = 30 bangles

Then, percentage of gold bangles = (20/30) x 100

= 66.67%

Percentage of silver bangles = (10/30) x 100

= 33.34%

(v) There are 120 voters, 90 of them voted. What percent did not vote?

Solution:-

From the question it is given that,

Total number of voters = 120

Number of voters voted = 90

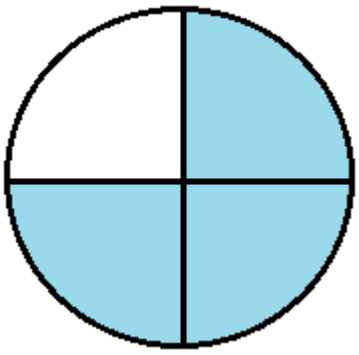
Number of voters did not vote = 120 – 90 = 30

Then, percent did not vote = (30/120) x 100

= 25%

4. Estimate the part of the figure which is shaded and hence find the percentage of the part which is shaded.

(i)



Solution:-

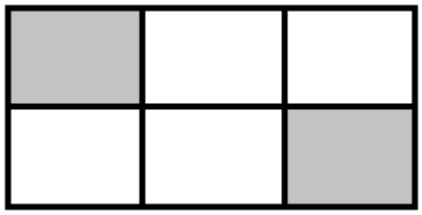
From the figure,

The shaded part = ¾

Then, the percentage of the part which is shaded = (¾) x 100

= 75%

(ii)



Solution:-

From the figure,

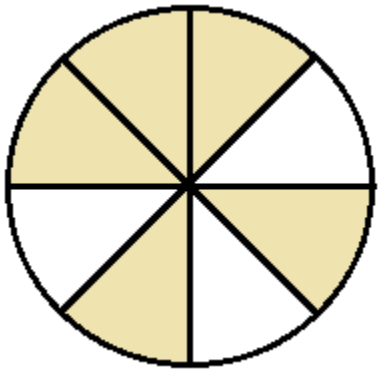
The shaded part = 2/6

= 1/3

Then, the percentage of the part which is shaded = (1/3) x 100

= 33.34%

(iii)



Solution:-

From the figure,

The shaded part = 5/8

Then, the percentage of the part which is shaded = (5/8) x 100

= 62.5%

5. Convert the following percentages into ratios in simplest form:

(i) 14%

Solution:-

14% can be written as,

= 14/100

= 7/50
It can be written in ratio form as = 7: 50

(ii) 7/4%
Solution:-
7/4% can be written as,
= (7/4)/100
= 7/(4 x 100)
= 7/400
It can be written in ratio form as = 7: 100

(iii) 100/3%
Solution:-
100/3% can be written as,
= (100/3)/100
= 100/(3 x 100)
= 1/3
It can be written in ratio form as = 1: 3

(iv) 37.5%
Solution:-
37.5% can be written as,
= 37.5/100
= 375/1000
= 3/8
It can be written in ratio form as = 3: 8

6. Express the following ratios as percentages:
(i) 5: 4
Solution:-
Above ratios can be written as = 5/4
Percentage = (5/4) x 100
= 5 x 25
= 125%

(ii) 1: 1
Solution:-

Above ratios can be written as = 1/1
Percentage = (1/1) x 100
= 100%

(iii) 2: 3
Solution:-
Above ratios can be written as = 2/3
Percentage = (2/3) x 100
= 66.67%

(iv) 9: 16
Solution:-
Above ratios can be written as = 9/16
Percentage = (9/16) x 100
= 0.5625 x 100
= 56.25%

7. An alloy consists of 7 parts of zinc and 33 parts of copper. Find the percentage of copper in the alloy.
Solution:-
From the question it is given that,
An alloy consists of 7 parts of zinc
33 parts of copper
Then, total parts contain in the alloy = 33 + 7 = 40
So, percentage of copper in the alloy = (33/40) x 100
= 82.5%