EXERCISE 16(A)

1. Express each of the following statements in the percentage form:
(i) 13 out of 20
(ii) 21 eggs out of 30 are good
Solution:
(i) 13 out of 20
The statement in the percentage form is shown below
13 / 20 × 100 = 13 / 2 × 10
= 13 × 5
= 65%
(ii) The statement in the percentage form is shown below
21 / 30 × 100 = 21 / 3 × 10
= 7 × 10
= 70%
Hence, 70% of eggs are good

2. Express the following fractions as percent:
(i) 3 / 200
(ii) 5 / 6
(iii) 65 / 80
(iv) 2 / 3
Solution:
(i) 3 / 200
Fractions as percentage is shown below
3 / 200 × 100 = 3 / 2
We get,
= 1.5%
(ii) 5 / 6
Fractions as percentage is shown below
5 / 6 × 100 = 500 / 6
On calculating, we get
= $83\frac{1}{3}$ %
(iii) 65 / 80
Fractions as percentage is shown below
65 / 80 × 100 = 65 / 8 × 10
= 325 / 4
On further calculation, we get

$= 81\frac{1}{4}\ \%$

(iv) 2 / 3

Fractions as percentage is shown below

2 / 3 × 100 = 200 / 3

On calculating, we get

$= 66\frac{2}{3}\ \%$

3. Express as percent:

(i) 0.10

(ii) 0.02

(iii) 0.7

(iv) 0.15

(v) 0.032

Solution:

(i) 0.10

The given decimal expressed in percent is as follows

0.10 × 100 = 10 / 100 × 100

We get,

= 10%

(ii) 0.02

The given decimal expressed in percent is as follows

0.02 × 100 = 2 / 100 × 100

We get,

= 2%

(iii) 0.7

The given decimal expressed in percent is as follows

0.7 × 100 = 7 / 10 × 100

We get,

= 70%

(iv) 0.15

The given decimal expressed in percent is as follows

0.15 × 100 = 15 / 100 × 100

We get,

= 15%

(v) 0.032

The given decimal expressed in percent is as follows

0.032 × 100 = 32 / 1000 × 100

We get,
= 3.2%

4. Convert into fractions in their lowest terms:
(i) 8%
(ii) 20%
(iii) 85%
(iv) 250%
(v) 12 ½ %
Solution:
(i) 8%
Fraction in its lowest form is shown below
8 / 100 = 4 / 50
We get,
= 2 / 25
(ii) 20%
Fraction in its lowest form is shown below
20 / 100 = 2 / 10
We get,
= 1 / 5
(iii) 85%
Fraction in its lowest form is shown below
85 / 100 = 17 / 20
(iv) 250%
Fraction in its lowest form is shown below
250 / 100 = 25 / 10
On further calculation, we get
= 5 / 2
= $2\frac{1}{2}$
(v) 12 ½ %
Fraction in its lowest form is shown below
(25 / 2) % = 25 / 200
On further calculation, we get
= 5 / 40
= 1 / 8

5. Express as decimal fractions:
(i) 25%
(ii) 108%
(iii) 95%
(iv) 4.5%
(v) 29.2%
Solution:
(i) 25%
The statement expressed as decimal fraction is given below
25 / 100
= 0.25
Hence, the decimal fraction of 25% is 0.25
(ii) 108%
The statement expressed as decimal fraction is given below
108 / 100
= 1.08
Hence, the decimal fraction of 108% is 1.08
(iii) 95%
The statement expressed as decimal fraction is given below
95 / 100
= 0.95
Hence, the decimal fraction of 95% is 0.95
(iv) 4.5%
The statement expressed as decimal fraction is given below
4.5 / 100 = 45 / 1000
We get,
= 0.045
Hence, the decimal fraction of 4.5% is 0.045
(v) 29.2%
The statement expressed as decimal fraction is given below
29.2 / 100 = 292 / 1000
We get,
= 0.292

6. Express each of the following natural numbers as percent:
(i) 7
(ii) 2
(iii) 19.5
(iv) 5.37

Solution:

(i) 7

The given natural number expressed in percent is shown below

7 × 100

= 700%

(ii) 2

The given natural number expressed in percent is shown below

2 × 100

= 200%

(iii) 19.5

The given natural number expressed in percent is shown below

19.5 × 100

= 1950%

(iv) 5.37

The given natural number expressed in percent is shown below

5.37 × 100

= 537%