

Decimal Fractions

EXERCISE 15(A)

Question 1.

Write the number of decimal places in each of the following :

(i) 7.03

(ii) 0.509

(iii) 146.2

(iv) 0.0065

(v) 8.03207

Solution:

(i) 7.03, the decimal part is .03 which contains two digits.

Number 7.03 has 2 decimal places.

(ii) 0.509, the decimal part is 0.509 which contains three digits.

Number 0.509 has 3 decimal places

(iii) 146.2, the decimal part is .2 which contains one digit.

Number 146.2 has 1 decimal place.

(iv) 0.0065, the decimal part is .0065 which contains four digits.

Number 0.0065 has 4 decimal places

(v) 8.03207, the decimal part is .03207 which contains five digits.

Number 8.03207 has 5 decimal places.

Question 2.

Convert the given unlike decimal fractions into like decimal fractions:

(i) 1.36, 239.8 and 47.008

(ii) 507.0752, 8.52073 and 0.808

(iii) 459.22, 7.03093 and 0.200037

Solution:

(i) $1.36 = 1.360$

$239.8 = 239.800$

$47.008 = 47.008$

(ii) $507.0752 = 507.07520$

$8.52073 = 8.52073$

$0.808 = 0.80800$

(iii) $459.22 = 459.220000$

$7.03093 = 7.030930$

$0.200037 = 0.200037$

Question 3.

Change each of the following fractions to a decimal fraction :

(i) $\frac{7}{10}$ (ii) $\frac{47}{10}$ (iii) $\frac{343}{100}$ (iv) $\frac{3}{10^3}$

(v) $\frac{7295}{10^5}$ (vi) $\frac{289}{10^6}$ (vii) 95-hundredths

Solution:

$$(i) \frac{7}{10} = 0.7 \quad (ii) \frac{47}{10} = 4.7$$

$$(iii) \frac{343}{100} = 3.43$$

$$(iv) \frac{3}{10^3} = \frac{3}{10 \times 10 \times 10} = \frac{3}{1000} = 0.003$$

$$(v) \frac{7295}{10^5} = \frac{7295}{10 \times 10 \times 10 \times 10 \times 10} \\ = \frac{7295}{100000} = 0.07295$$

$$(vi) \frac{289}{10^6} = \frac{289}{10 \times 10 \times 10 \times 10 \times 10 \times 10} \\ = \frac{289}{10,00,000} = 0.000289$$

$$(vii) \text{95-hundredths} = \frac{95}{100} = 0.95$$

Question 4.

Convert into a decimal fraction :

$$(i) \frac{3}{4} \quad (ii) \frac{3}{40} \quad (iii) \frac{1}{125} \quad (iv) \frac{7}{25}$$

Solution:

$$(i) \frac{3}{4} = \frac{3 \times 25}{4 \times 25} = \frac{75}{100} = 0.75$$

$$(ii) \frac{3}{40} = \frac{3 \times 25}{40 \times 25} = \frac{75}{1000} = 0.075$$

$$(iii) \frac{1}{125} = \frac{1 \times 8}{125 \times 8} = \frac{8}{1000} = 0.008$$

$$(iv) \frac{7}{25} = \frac{7 \times 4}{25 \times 4} = \frac{28}{100} = 0.28$$

Question 5.

Change the given decimal fractions to fractions in their lowest terms :

(i) 0.05

(ii) 3.95

(iii) 4.005

(iv) 0.876

(v) 50.06

(vi) 0.01075

(vii) 4.8806

Solution:

$$(i) 0.05 = \frac{5}{100} = \frac{1}{20}$$

$$(ii) 3.95 = \frac{395}{100} = \frac{79}{20} = 3\frac{19}{20}$$

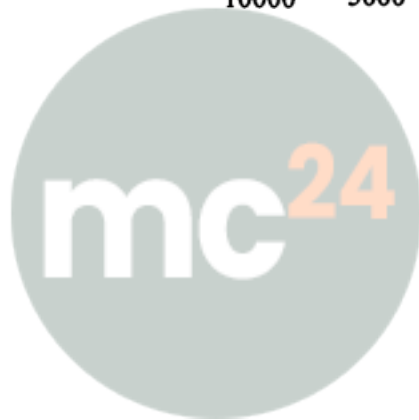
$$(iii) 4.005 = \frac{4005}{1000} = \frac{801}{200} = 4\frac{1}{200}$$

$$(iv) 0.876 = \frac{876}{1000} = \frac{219}{250}$$

$$(v) 50.06 = \frac{5006}{100} = \frac{2503}{50} = 50\frac{3}{50}$$

$$(vi) 0.01075 = \frac{1075}{100000} = \frac{43}{4000}$$

$$(vii) 4.8806 = \frac{48806}{10000} = \frac{24403}{5000} = 4\frac{4403}{5000}$$



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