

Decimals

Exercise 3A

Q1

Answer :

We have:

$$(i) 0.8 = \frac{8}{10} = \frac{8 \div 2}{10 \div 2} = \frac{4}{5}$$

$$(ii) 0.75 = \frac{75}{100} = \frac{75 \div 25}{100 \div 25} = \frac{3}{4}$$

$$(iii) 0.06 = \frac{6}{100} = \frac{6 \div 2}{100 \div 2} = \frac{3}{50}$$

$$(iv) 0.285 = \frac{285}{1000} = \frac{285 \div 5}{1000 \div 5} = \frac{57}{200}$$

Q2

Answer :

We have:

$$(i) 5.6 = \frac{56}{10} = \frac{56 \div 2}{10 \div 2} = \frac{28}{5} = 5 \frac{3}{5}$$

$$(ii) 12.25 = \frac{1225}{100} = \frac{1225 \div 25}{100 \div 25} = \frac{49}{4} = 12 \frac{1}{4}$$

$$(iii) 6.004 = \frac{6004}{1000} = \frac{6004 \div 4}{1000 \div 4} = \frac{1501}{250} = 6 \frac{1}{250}$$

$$(iv) 4.625 = \frac{4625}{1000} = \frac{4625 \div 125}{1000 \div 125} = \frac{37}{8} = 4 \frac{5}{8}$$

Q3

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Same textbooks, knock away

Answer :

(i) $\frac{47}{10}$

On dividing, we get:

$$\begin{array}{r} 10 \overline{) 47} \quad (4.7 \\ \underline{-40} \\ 70 \\ \underline{-70} \\ \times \\ \therefore \frac{47}{10} = 4.7 \end{array}$$

(ii) $\frac{156}{100}$

On dividing, we get:

Q4

Answer :

Converting the given decimals into like decimals, we have:

(i) 6.500, 16.030, 0.274 and 119.400

(ii) 3.50, 0.67, 15.60 and 4.00

Q5

Answer :

We have,

(i) Comparing the whole number part, $78 > 69$.

Thus, $78.23 > 69.85$

(ii) Converting the decimals into like decimals, we get 3.406 and 3.460.

Comparing the whole number parts, $3 = 3$

Comparing the tenths digit, $4 = 4$

Comparing the hundredths digit, $6 > 0$

Thus, $3.406 < 3.46$

(iii) Comparing the whole number parts, $5 = 5$

Comparing the tenths digit, $6 < 8$

Thus, $5.68 < 5.86$

(iv) Converting the decimals into like decimals, we get 14.050 and 14.005.

Comparing the whole number parts, $14 = 14$

Comparing the tenths digit, $0 = 0$

Comparing the hundredths digit, $5 > 0$

Thus, $14.05 > 14.005$

(v) Converting the decimals into like decimals, we get 1.850 and 1.805.

Comparing the whole number parts, $1 = 1$

Comparing the tenths digit, $8 = 8$

Comparing the hundredths digit, $5 > 0$

Thus, $1.85 > 1.805$

(vi) Comparing the whole number parts, $0 < 1$

Thus, $0.98 < 1.07$

Q6

Answer :

(i) Converting the given decimals into like decimals, we get:

4.60, 7.40, 4.58, 7.32, 4.06

Clearly, $4.06 < 4.58 < 4.60 < 7.32 < 7.40$

Hence, the given decimals in ascending order are 4.06, 4.58, 4.6, 7.32 and 7.4.

(ii) Converting the given decimals into like decimals, we get:

0.50, 5.50, 5.05, 0.05, 5.55

Clearly, $0.05 < 0.50 < 5.05 < 5.50 < 5.55$

Hence, the given decimals in ascending order are 0.05, 0.5, 5.05, 5.5 and 5.55.

(iii) Converting the given decimals into like decimals, we get:

6.84, 6.48, 6.80, 6.40, 6.08

Clearly, $6.08 < 6.40 < 6.48 < 6.80 < 6.84$

Hence, the given decimals in ascending order are 6.08, 6.4, 6.48, 6.8 and 6.84.

(iv) Converting the given decimals into like decimals, we get:

2.200, 2.202, 2.020, 22.200, 2.002

Clearly, $2.002 < 2.020 < 2.200 < 2.202 < 22.200$

Hence, the given decimals in ascending order are 2.002, 2.02, 2.2, 2.202 and 22.2.

Q7

Answer :

(i) Converting the given decimals into like decimals, we get:

7.40, 8.34, 74.40, 7.44, 0.74

Clearly, $74.40 > 8.34 > 7.44 > 7.40 > 0.74$

Hence, the given decimals in descending order are 74.4, 8.34, 7.44, 7.4 and 0.74.

(ii) Converting the given decimals into like decimals, we get:

2.600, 2.260, 2.060, 2.007, 2.300

Clearly, $2.600 > 2.300 > 2.260 > 2.060 > 2.007$

Hence, the given decimals in descending order are 2.6, 2.3, 2.26, 2.06 and 2.007.

Q8

Answer :

$$45 \text{ mm} = \frac{45}{10} \text{ cm} = 4.5 \text{ cm}$$

$$= 4.5 \text{ cm} = \frac{4.5}{100} \text{ m} = 0.045 \text{ m}$$

$$= 0.045 \text{ m} = \frac{0.045}{1000} \text{ km} = 0.000045 \text{ km}$$

$$\therefore 45 \text{ mm} = 4.5 \text{ cm} = 0.045 \text{ m} = 0.000045 \text{ km}$$

Q9

Answer :

We have:

$$(i) 8 \text{ paise} = \text{Rs } \frac{8}{100} = \text{Rs } 0.08$$

$$(ii) 9 \text{ rupees } 75 \text{ paise} = \text{Rs } \left(9 + \frac{75}{100} \right) = \text{Rs } (9 + 0.75) = \text{Rs } 9.75$$

$$(iii) 8 \text{ rupees } 5 \text{ paise} = \text{Rs } \left(8 + \frac{5}{100} \right) = \text{Rs } (8 + 0.05) = \text{Rs } 8.05$$

Q10

Answer :

We have:

$$(i) 65 \text{ m} = \frac{65}{1000} \text{ km} = 0.065 \text{ km}$$

$$\therefore 65 \text{ m} = 0.065 \text{ km}$$

$$(ii) 284 \text{ m} = \frac{284}{1000} \text{ km} = 0.284 \text{ km}$$

$$(iii) 3 \text{ km } 5 \text{ m} = \left(3 + \frac{5}{1000} \right) = (3 + 0.005) = 3.005 \text{ km}$$