

EXERCISE 3.3

PAGE NO: 3.16

1. Divide:

(i) 142.45 by 10

(ii) 54.25 by 10

(iii) 3.45 by 10

(iv) 0.57 by 10

(v) 0.0043 by 10

(vi) 0.004 by 10

Solution:

(i) Given 142.45 by 10

Now shifting the decimal point by one place to the left we can get the result

$$142.45/10 = 14.245$$

(ii) Given 54.25 by 10

Now shifting the decimal point by one place to the left we can get the result

$$54.25/10 = 5.425$$

(iii) Given 3.45 by 10

Now shifting the decimal point by one place to the left we can get the result

$$3.45/10 = 0.345$$

(iv) Given 0.57 by 10

Now shifting the decimal point by one place to the left we can get the result

$$0.57/10 = 0.057$$

(v) Given 0.0043 by 10

Now shifting the decimal point by one place to the left we can get the result

$$0.0043/10 = 0.0043$$

(vi) Given 0.004 by 10

Now shifting the decimal point by one place to the left we can get the result

$$0.004/10 = 0.0004$$

2. Divide:

(i) 459.5 by 100

(ii) 74.3 by 100

(iii) 5.8 by 100

(iv) 0.7 by 100

(v) 0.48 by 100

(vi) 0.03 by 100

Solution:

(i) Given 459.5 by 100

Now shifting the decimal point by two places to the left we can get the result
 $459.5/100 = 4.595$

(ii) Given 74.3 by 100

Now shifting the decimal point by two places to the left we can get the result
 $74.3/100 = 0.743$

(iii) Given 5.8 by 100

Now shifting the decimal point by two places to the left we can get the result
 $5.8/100 = 0.058$

(iv) Given 0.7 by 100

Now shifting the decimal point by two places to the left we can get the result
 $0.7/100 = 0.007$

(v) Given 0.48 by 100

Now shifting the decimal point by two places to the left we can get the result
 $0.48/100 = 0.0048$

(vi) Given 0.03 by 100

Now shifting the decimal point by two places to the left we can get the result
 $0.03 / 100 = 0.0003$

3. Divide:

(i) 235. 41 by 1000

(ii) 29.5 by 1000

(iii) 3.8 by 1000

(iv) 0.7 by 1000

Solution:

(i) Given 235.41 by 1000

Now shifting the decimal point by three places to the left we can get the result
 $235.41/1000 = 0.23541$

(ii) Given 29.5 by 1000

Now shifting the decimal point by three places to the left we can get the result
 $29.5/1000 = 0.0295$

(iii) Given 3.8 by 1000

Now shifting the decimal point by three places to the left we can get the result
 $3.8/1000 = 0.0038$

(iv) Given 0.7 by 1000

Now shifting the decimal point by three places to the left we can get the result
 $0.7/1000 = 0.0007$

4. Divide:

(i) 0.45 by 9

(ii) 217.44 by 18

(iii) 319.2 by 2.28

(iv) 40.32 by 9.6

(v) 0.765 by 0.9

(vi) 0.768 by 1.6

Solution:

(i) Given 0.45 by 9

$$\begin{array}{r} 0.05 \\ 9 \overline{) 0.45} \\ \underline{- 0} \\ 04 \\ \underline{- 0} \\ 45 \\ \underline{- 45} \\ 0 \end{array}$$

$$0.45 \text{ by } 9 = 0.05$$

(ii) Given 217.44 by 18

$$\begin{array}{r} 012.08 \\ 18 \overline{) 217.44} \\ \underline{- 0} \\ 21 \\ \underline{- 18} \\ 37 \\ \underline{- 36} \\ 14 \\ \underline{- 0} \\ 144 \\ \underline{- 144} \\ 0 \end{array}$$

$$217.44 \text{ by } 18 = 12.08$$

3. Given 319.2 by 2.28

$$\begin{array}{r} 00140 \\ 228 \overline{) 31920} \\ \underline{- 0} \\ 31 \\ \underline{- 0} \\ 319 \\ \underline{- 228} \\ 912 \\ \underline{- 912} \\ 00 \\ \underline{- 0} \\ 0 \end{array}$$

$$319.2 \text{ by } 2.28 = 140$$

(iv) Given 40.32 by 9.6

$$\begin{array}{r} 004.2 \\ 96 \overline{)403.2} \\ \underline{-0} \\ 40 \\ \underline{-0} \\ 403 \\ \underline{-384} \\ 192 \\ \underline{-192} \\ 0 \end{array}$$

$$40.32 \text{ by } 9.6 = 4.2$$

(v) Given 0.765 by 0.9

$$\begin{array}{r} 0.85 \\ 9 \overline{)7.65} \\ \underline{-0} \\ 76 \\ \underline{-72} \\ 45 \\ \underline{-45} \\ 0 \end{array}$$

$$0.765 \text{ by } 0.9 = 0.85$$

(vi) Given 0.768 by 1.6



$$\begin{array}{r} 0.48 \\ 16 \overline{) 7.68} \\ \underline{- 0} \\ 76 \\ \underline{- 64} \\ 128 \\ \underline{- 128} \\ 0 \end{array}$$

$0.768 \text{ by } 1.6 = 0.48$

5. Divide:

(i) 16.64 by 20

(ii) 0.192 by 12

(iii) 163.44 by 24

(iv) 403.2 by 96

(v) 16.344 by 12

(vi) 31.92 by 228

Solution:

(i) Given 16.64 by 20

$$\begin{array}{r} 0.832 \\ 20 \overline{) 16.640} \\ \underline{- 0} \\ 16 \\ \underline{- 0} \\ 166 \\ \underline{- 160} \\ 64 \\ \underline{- 60} \\ 40 \\ \underline{- 40} \\ 0 \end{array}$$

$$16.64 \text{ by } 20 = 0.832$$

(ii) Given 0.192 by 12

$$\begin{array}{r} 0.016 \\ 12 \overline{) 0.192} \\ \underline{- 0} \\ 01 \\ \underline{- 0} \\ 19 \\ \underline{- 12} \\ 72 \\ \underline{- 72} \\ 0 \end{array}$$

$$0.192 \text{ by } 12 = 0.016$$

(iii) Given 163.44 by 24

$$\begin{array}{r} 6.81 \\ 24 \overline{) 163.44} \\ \underline{- 0} \\ 16 \\ \underline{- 0} \\ 163 \\ \underline{- 144} \\ 194 \\ \underline{- 192} \\ 24 \\ \underline{- 24} \\ 0 \end{array}$$

$$163.44 \text{ by } 24 = 6.81$$

(iv) Given 403.2 by 96

$$\begin{array}{r} 004.2 \\ 96 \overline{) 403.2} \\ \underline{- 0} \\ 40 \\ \underline{- 0} \\ 403 \\ \underline{- 384} \\ 192 \\ \underline{- 192} \\ 0 \end{array}$$

403.2 by 96 = 4.2

(v) Given 16.344 by 12

$$\begin{array}{r} 01.362 \\ 12 \overline{) 16.344} \\ \underline{- 0} \\ 16 \\ \underline{- 12} \\ 43 \\ \underline{- 36} \\ 74 \\ \underline{- 72} \\ 24 \\ \underline{- 24} \\ 0 \end{array}$$

16.344 by 12 = 1.362

(vi) Given 31.92 by 228

$$\begin{array}{r}
 00.14 \\
 228 \overline{) 31.92} \\
 \underline{- 0} \\
 31 \\
 \underline{- 0} \\
 319 \\
 \underline{- 228} \\
 912 \\
 \underline{- 912} \\
 0
 \end{array}$$

$31.92 \text{ by } 228 = 0.14$

6. Divide:

(i) 15.68 by 20

(ii) 164.6 by 200

(iii) 403.80 by 30

Solution:

(i) Given 15.68 by 20

$$\begin{array}{r}
 00.784 \\
 20 \overline{) 15.680} \\
 \underline{- 0} \\
 15 \\
 \underline{- 0} \\
 156 \\
 \underline{- 140} \\
 168 \\
 \underline{- 160} \\
 80 \\
 \underline{- 80} \\
 0
 \end{array}$$

$$15.68 \text{ by } 20 = 0.784$$

(ii) Given 164.6 by 200

$$\begin{array}{r}
 \\
 200 \overline{) 164.600} \\
 \underline{- 0} \\
 16 \\
 \underline{- 0} \\
 164 \\
 \underline{- 0} \\
 1646 \\
 \underline{- 1600} \\
 460 \\
 \underline{- 400} \\
 600 \\
 \underline{- 600} \\
 0
 \end{array}$$

$$164.6 \text{ by } 200 = 0.823$$

(iii) Given 403.80 by 30

$$\begin{array}{r}
 \\
 30 \overline{) 403.80} \\
 \underline{- 0} \\
 40 \\
 \underline{- 30} \\
 103 \\
 \underline{- 90} \\
 138 \\
 \underline{- 120} \\
 180 \\
 \underline{- 180} \\
 0
 \end{array}$$

$$403.80 \text{ by } 30 = 13.46$$

7. Divide:

(i) 76 by 0.019

(ii) 88 by 0.08

(iii) 148 by 0.074

(iv) 7 by 0.014

Solution:

(i) Given 76 by 0.019

Multiply both numerator and denominator by 1000 then divide
= $76000/19$

$$\begin{array}{r} 04000 \\ 19 \overline{) 76000} \\ \underline{- 0} \\ 76 \\ \underline{- 76} \\ 00 \\ \underline{- 0} \\ 00 \\ \underline{- 0} \\ 00 \\ \underline{- 0} \\ 00 \\ \underline{- 0} \\ 0 \end{array}$$

Myclass24
Your Class. Your Pace.

$$76 \text{ by } 0.019 = 4000$$

(ii) Given 88 by 0.08

Multiply both numerator and denominator by 100 then divide
= $8800/8$

$$\begin{array}{r}
 1100 \\
 8 \overline{) 8800} \\
 \underline{- 8} \\
 08 \\
 \underline{- 8} \\
 00 \\
 \underline{- 0} \\
 00 \\
 \underline{- 0} \\
 0
 \end{array}$$

$88 \text{ by } 0.08 = 1100$

(iii) Given 148 by 0.074

Multiply both numerator and denominator by 1000 then divide

$= 14800/74$

$$\begin{array}{r}
 002000 \\
 74 \overline{) 148000} \\
 \underline{- 0} \\
 14 \\
 \underline{- 0} \\
 148 \\
 \underline{- 148} \\
 00 \\
 \underline{- 0} \\
 00 \\
 \underline{- 0} \\
 00 \\
 \underline{- 0} \\
 0
 \end{array}$$

$148 \text{ by } 0.074 = 2000$

(iv) Given 7 by 0.014

Multiply both numerator and denominator by 1000 then divide
= 7000/14

$$\begin{array}{r}
 \overline{) 0500} \\
 14 \overline{) 7000} \\
 \underline{- 0} \\
 70 \\
 \underline{- 70} \\
 00 \\
 \underline{- 0} \\
 00 \\
 \underline{- 0} \\
 0
 \end{array}$$

7 by 0.014 = 500

8. Divide:

(i) 20 by 50

(ii) 8 by 100

(iii) 72 by 576

(iv) 144 by 15

Solution:

(i) Given 20 by 50

$$\begin{array}{r}
 \overline{) 00.4} \\
 50 \overline{) 20.0} \\
 \underline{- 0} \\
 20 \\
 \underline{- 0} \\
 200 \\
 \underline{- 200} \\
 0
 \end{array}$$


20 by 50 = 0.4

(ii) Given 8 by 100

$$\begin{array}{r} 0.08 \\ 100 \overline{)8.00} \\ \underline{-0} \\ 80 \\ \underline{-0} \\ 800 \\ \underline{-800} \\ 0 \end{array}$$

8 by 100 = 0.08

(iii) Given 72 by 576


$$\begin{array}{r} 0.125 \\ 576 \overline{)72.000} \\ \underline{-0} \\ 720 \\ \underline{-576} \\ 1440 \\ \underline{-1152} \\ 2880 \\ \underline{-2880} \\ 0 \end{array}$$

Myclass24
Your Class. Your Pace.

72 by 576 = 0.125

(iv) Given 144 by 15

$$\begin{array}{r} 009.6 \\ 15 \overline{) 144.0} \\ \underline{- 0} \\ 14 \\ \underline{- 0} \\ 144 \\ \underline{- 135} \\ 90 \\ \underline{- 90} \\ 0 \end{array}$$

144 by 15 = 9.6

9. A vehicle covers a distance of 43.2 km in 2.4 litres of petrol. How much distance will travel in 1 litre of petrol?

Solution:

Given distance covered by vehicle in 2.4 litres of petrol is = 43.2 km

Distance travel by vehicle in 1 litre of petrol = $43.2/2.4$

Multiply both numerator and denominator by 10 then we get $432/24$

On dividing

$$\begin{array}{r} 018 \\ 24 \overline{) 432} \\ \underline{- 0} \\ 43 \\ \underline{- 24} \\ 192 \\ \underline{- 192} \\ 0 \end{array}$$

Therefore 18km can travel in 1litre of petrol.

10. The total weight of some bags of wheat is 1743 kg. If each bag weighs 49.8 kg, how many bags are there?

Solution:

Given total weight of total bags = 1743 kg

Each bag weighs = 49.8 kg

Number of bags = $1743/49.8$

Multiply both numerator and denominator by 10 then we get $17430/498$

On dividing

$$\begin{array}{r} \overline{) 17430} \\ \underline{0} \\ 17 \\ \underline{0} \\ 174 \\ \underline{0} \\ 1743 \\ \underline{1494} \\ 2490 \\ \underline{2490} \\ 0 \end{array}$$

Myclass24
Your Class. Your Pace.

Therefore number of bags are 35

11. Shikha cuts 50 m of cloth into pieces of 1.25 m each. How many pieces does she get?

Solution:

Given that total length of cloth = 50 m

Length of each piece = 1.25 m

Number of cloth piece = $50/1.25$

Multiply both numerator and denominator by 100 then we get $5000/125$

On dividing

$$\begin{array}{r}
 0040 \\
 125 \overline{)5000} \\
 \underline{-0} \\
 50 \\
 \underline{-0} \\
 500 \\
 \underline{-500} \\
 00 \\
 \underline{-0} \\
 0
 \end{array}$$

Number of cloth piece = 40

12. Each side of a rectangular polygon is 2.5cm in length. The perimeter of the polygon is 12.5 cm. How many sides does the polygon have?

Solution:

Given that length of each side of polygon is = 2.5 cm

Perimeter of polygon = 12.5 cm

Number of sides = $12.5/2.5$

Multiply both numerator and denominator by 10 then we get $125/25$

On dividing

$$\begin{array}{r}
 005 \\
 25 \overline{)125} \\
 \underline{-0} \\
 12 \\
 \underline{-0} \\
 125 \\
 \underline{-125} \\
 0
 \end{array}$$

Number of sides of polygon is 5

13. The product of two decimals is 42.987. If one of them is 12.46, find the other.

Solution:

Given that product of two decimals = 42.987

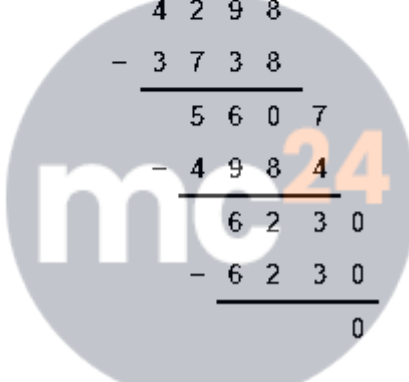
One of the number is = 12.46

Another number is = $42.987/12.46$

Multiply both numerator and denominator by 1000 then we get $42987/12460$

On dividing

$$\begin{array}{r} 0003.45 \\ 1246 \overline{) 4298.70} \\ \underline{- 0} \\ 42 \\ \underline{- 0} \\ 429 \\ \underline{- 0} \\ 4298 \\ \underline{- 3738} \\ 5607 \\ \underline{- 4984} \\ 6230 \\ \underline{- 6230} \\ 0 \end{array}$$



Another number is 3.45

14. The weight of 34 bags of sugar is 3483.3 kg. If all bags weigh equally, find the weight of each bag.

Solution:

Given that weight of 34 bags of sugar is = 3483.3 kg

Weight of each bag = $3483.3/34$

Multiply both numerator and denominator by 10 then we get $34833/34$

On dividing

$$\begin{array}{r} 0102.45 \\ 34 \overline{) 3483.30} \\ \underline{- 0} \\ 34 \\ \underline{- 34} \\ 08 \\ \underline{- 0} \\ 83 \\ \underline{- 68} \\ 153 \\ \underline{- 136} \\ 170 \\ \underline{- 170} \\ 0 \end{array}$$

Weight of each bag = 102.45 kg

15. How many buckets of equal capacity can be filled from 586.5 litres of water, if each has capacity of 8.5 litres?

Solution:

Given that capacity of each bucket = 8.5 litres

Total water available = 586.5 litres

Number of buckets = $586.5/8.5$

Multiply both numerator and denominator by 10 then we get $5865/85$

On dividing

RD Sharma Solutions for Class 7 Maths Chapter 3
Decimals

$$\begin{array}{r} \overline{0069} \\ 85 \overline{)5865} \\ \underline{-0} \\ 58 \\ \underline{-0} \\ 586 \\ \underline{-510} \\ 765 \\ \underline{-765} \\ 0 \end{array}$$

Number of buckets = 69



Myclass24
Your Class. Your Pace.