

EXERCISE 4C

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**1. Multiply:**

(i) 0.87 by 10

(ii) 2.948 by 100

(iii) 6.4 by 1000

(iv) 5.8 by 4

(v) 16.32 by 28

(vi) 5.037 by 8

(vii) 4.6 by 2.1

(viii) 0.568 by 6.4

**Solution:**

(i) 0.87 by 10

It can be written as

$$0.87 \times 10 = 8.7$$

(ii) 2.948 by 100

It can be written as

$$2.948 \times 100 = 294.8$$

(iii) 6.4 by 1000

It can be written as

$$6.4 \times 1000 = 6400$$

(iv) 5.8 by 4

It can be written as

$$5.8 \times 4 = 23.2$$

**5.8****× 4****23.2**

(v) 16.32 by 28

It can be written as

$$16.32 \times 28 = 456.96$$

**16.32****× 28****130.56****326.4****456.96**

(vi) 5.037 by 8

It can be written as

$$5.037 \times 8 = 40.296$$

**5.037****× 8****40.296**

(vi) 4.6 by 2.1

It can be written as

$$4.6 \times 2.1 = 9.66$$

$$\begin{array}{r} 4.6 \\ \times 2.1 \\ \hline 46 \\ \times 92 \\ \hline 9.66 \end{array}$$

(viii) 0.568 by 6.4

It can be written as

$$0.568 \times 6.4 = 3.6352$$

$$\begin{array}{r} 0.568 \\ \times 6.4 \\ \hline 2272 \\ \times 34080 \\ \hline 3.6352 \end{array}$$

**2. Multiply each number by 10, 100, 1000:**

(i) 0.5

(ii) 0.112

(iii) 4.8

(iv) 0.0359

(v) 16.27

(vi) 234.8

**Solution:**

(i) 0.5

It can be written as

$$0.5 \times 10 = 5$$

$$0.5 \times 100 = 50$$

$$0.5 \times 1000 = 500$$

(ii) 0.112

It can be written as

$$0.112 \times 10 = 1.12$$

$$0.112 \times 100 = 11.2$$

$$0.112 \times 1000 = 112$$

(iii) 4.8

It can be written as

$$4.8 \times 10 = 48$$

$$4.8 \times 100 = 480$$

$$4.8 \times 1000 = 4800$$

(iv) 0.0359

It can be written as

$$0.0359 \times 10 = 0.359$$

$$0.0359 \times 100 = 3.59$$

$$0.0359 \times 1000 = 35.9$$

(v) 16.27

It can be written as

$$16.27 \times 10 = 162.7$$

$$16.27 \times 100 = 1627$$

$$16.27 \times 1000 = 16270$$

(vi) 234.8

It can be written as

$$234.8 \times 10 = 2348$$

$$234.8 \times 100 = 23480$$

$$234.8 \times 1000 = 234800$$

### 3. Evaluate:

(i)  $5.897 \times 2.3$

(ii)  $0.894 \times 87$

(iii)  $0.01 \times 0.001$

(iv)  $0.84 \times 2.2 \times 4$

(v)  $4.75 \times 0.08 \times 3$

(vi)  $2.4 \times 3.5 \times 4.8$

(vii)  $0.8 \times 1.2 \times 0.25$

(viii)  $0.3 \times 0.03 \times 0.003$

**Solution:**

(i)  $5.897 \times 2.3$

We know that

$$5.897 \times 2.3 = 13.5631$$

$$\begin{array}{r} 5.897 \\ \times 2.3 \\ \hline 17691 \\ \times 11794 \\ \hline 13.5631 \end{array}$$

(ii)  $0.894 \times 87$

We know that

$$0.894 \times 87 = 77.778$$

$$\begin{array}{r} 0.894 \\ \times 87 \\ \hline 6258 \\ \times 7152 \\ \hline 77.778 \end{array}$$

(iii)  $0.01 \times 0.001$

We know that

$$0.01 \times 0.001 = 0.00001$$

(iv)  $0.84 \times 2.2 \times 4$

It can be written as

$= 0.84 \times 8.8$

$= 7.392$

$$\begin{array}{r} 84 \\ \times 88 \\ \hline 672 \\ \times 672 \\ \hline 7392 \end{array}$$

(v)  $4.75 \times 0.08 \times 3$

It can be written as

$= 4.75 \times 0.24$

$= 1.1400$

$= 1.14$

$$\begin{array}{r} 4.75 \\ \times 0.24 \\ \hline 1900 \\ \times 950 \\ \hline 1.14 \end{array}$$

(vi)  $2.4 \times 3.5 \times 4.8$

It can be written as

$= 8.40 \times 4.8$

$= 8.4 \times 4.8$

We get

$= 40.32$

$$\begin{array}{r} 24 \\ \times 35 \\ \hline 120 \\ \times 72 \\ \hline 840 \end{array} \quad \begin{array}{r} 8.4 \\ \times 48 \\ \hline 672 \\ \times 336 \\ \hline 4032 \end{array}$$

(vii)  $0.8 \times 1.2 \times 0.25$

It can be written as

$= 0.96 \times 0.25$

$= 0.2400$

$= 0.24$

$$\begin{array}{r} 96 \\ \times 25 \\ \hline 480 \\ \times 192 \\ \hline 2400 \end{array}$$

(viii)  $0.3 \times 0.03 \times 0.003$

It can be written as

$= 0.009 \times 0.003$

$$= 0.000027$$

**4. Divide:**

(i) 54.9 by 10

(ii) 7.8 by 100

(iii) 324.76 by 1000

(iv) 12.8 by 4

(v) 27.918 by 9

(vi) 4.672 by 8

(vii) 4.32 by 1.2

(viii) 7.644 by 1.4

(ix) 4.8432 by 0.08

**Solution:**

(i) 54.9 by 10

It can be written as

$$54.9 \div 10 = 5.49$$

(ii) 7.8 by 100

It can be written as

$$7.8 \div 100 = 0.078$$

(iii) 324.76 by 1000

It can be written as

$$324.76 \div 1000 = 0.32476$$

(iv) 12.8 by 4

It can be written as

$$12.8 \div 4 = 3.2$$

(v) 27.918 by 9

It can be written as

$$27.918 \div 9 = 3.102$$

(vi) 4.672 by 8

It can be written as

$$4.672 \div 8 = 0.584$$

$$\begin{array}{r} 0.584 \\ 8 \overline{) 4.672} \\ \underline{- 40} \phantom{00} \\ 67 \phantom{00} \\ \underline{- 64} \phantom{00} \\ 32 \phantom{00} \\ \underline{- 32} \phantom{00} \\ 0 \end{array}$$

(vii) 4.32 by 1.2

It can be written as

$$4.32 \div 1.2$$

Multiplying by 100

$$432 \div 120 = 3.6$$

$$\begin{array}{r} 3.6 \\ 120 \overline{) 432} \\ \underline{- 360} \phantom{00} \\ 720 \\ \underline{- 720} \\ 0 \end{array}$$

(viii)  $7.644$  by  $1.4$

It can be written as

$$7.644 \div 1.4$$

Multiplying by 1000

$$7644 \div 1400 = 5.46$$

$$\begin{array}{r} 5.46 \\ 1400 \overline{) 7644} \\ \underline{- 7000} \phantom{00} \\ 6440 \\ \underline{- 5600} \phantom{00} \\ 8400 \\ \underline{- 8400} \\ 0 \end{array}$$

(ix)  $4.8432$  by  $0.08$

It can be written as

$$4.8432 \div 0.08$$

So we get

$$48432 \div 800 = 60.54$$

$$\begin{array}{r} 60.54 \\ 800 \overline{) 48432} \\ \underline{- 4800} \phantom{00} \\ 4320 \\ \underline{- 4000} \phantom{00} \\ 3200 \\ \underline{- 3200} \\ 0 \end{array}$$

5. Divide each of the given numbers by 10, 100, 1000 and 10000

(i) 2.1

(ii) 8.64

(iii) 5.01

(iv) 0.0906

(v) 0.125

(vi) 111.11

**Solution:**

(i) 2.1

It can be written as

$$2.1 \div 10 = 0.21$$

$$2.1 \div 100 = 0.021$$

$$2.1 \div 1000 = 0.0021$$

$$2.1 \div 10000 = 0.00021$$

(ii) 8.64

It can be written as

$$8.64 \div 10 = 0.864$$

$$8.64 \div 100 = 0.0864$$

$$8.64 \div 1000 = 0.00864$$

$$8.64 \div 10000 = 0.000864$$

(iii) 5.01

It can be written as

$$5.01 \div 10 = 0.501$$

$$5.01 \div 100 = 0.0501$$

$$5.01 \div 1000 = 0.00501$$

$$5.01 \div 10000 = 0.000501$$

(iv) 0.0906

It can be written as

$$0.0906 \div 10 = 0.00906$$

$$0.0906 \div 100 = 0.000906$$

$$0.0906 \div 1000 = 0.0000906$$

$$0.0906 \div 10000 = 0.00000906$$

(v) 0.125

It can be written as

$$0.125 \div 10 = 0.0125$$

$$0.125 \div 100 = 0.00125$$

$$0.125 \div 1000 = 0.000125$$

$$0.125 \div 10000 = 0.0000125$$

(vi) 111.11

It can be written as

$$111.11 \div 10 = 11.111$$

$$111.11 \div 100 = 1.1111$$

$$111.11 \div 1000 = 0.11111$$

$$111.11 \div 10000 = 0.011111$$

**6. Evaluate :**

(i)  $9.75 \div 5$

(ii)  $4.4064 \div 4$

(iii)  $27.69 \div 30$

- (iv)  $19.25 \div 25$   
(v)  $20.64 \div 16$   
(vi)  $3.204 \div 9$   
(vii)  $0.125 \div 25$   
(viii)  $0.14616 \div 72$   
(ix)  $0.6227 \div 1300$   
(x)  $257.894 \div 0.169$   
(xi)  $6.3 \div (0.3)^2$

**Solution:**

(i)  $9.75 \div 5$

We get

$$9.75 \div 5 = 1.95$$

$$\begin{array}{r} 1.95 \\ 5 \overline{) 9.75} \\ \underline{5} \phantom{00} \\ 47 \phantom{0} \\ \underline{45} \phantom{0} \\ 25 \phantom{0} \\ \underline{25} \phantom{0} \\ 0 \end{array}$$

(ii)  $4.4064 \div 4$

We get

$$4.4064 \div 4 = 1.016$$

(iii)  $27.69 \div 30$

We get

$$27.69 \div 30 = 0.923$$

$$\begin{array}{r} 0.923 \\ 30 \overline{) 27.69} \\ \underline{270} \phantom{00} \\ 69 \phantom{0} \\ \underline{60} \phantom{0} \\ 90 \phantom{0} \\ \underline{90} \phantom{0} \\ 0 \end{array}$$

(iv)  $19.25 \div 25$

We get

$$19.25 \div 25 = 0.77$$

$$\begin{array}{r} 0.77 \\ 25 \overline{) 19.25} \\ \underline{175} \phantom{00} \\ 175 \phantom{0} \\ \underline{175} \phantom{0} \\ 0 \end{array}$$



(v)  $20.64 \div 16$

We get

$20.64 \div 16 = 1.29$

$$\begin{array}{r} 1.29 \\ 16 \overline{) 20.64} \\ \underline{- 16} \phantom{00} \\ 46 \phantom{00} \\ \underline{- 32} \phantom{00} \\ 144 \phantom{00} \\ \underline{- 144} \phantom{00} \\ 0 \end{array}$$

(vi)  $3.204 \div 9$

We get

$3.204 \div 9 = 0.356$

$$\begin{array}{r} 0.356 \\ 9 \overline{) 3.204} \\ \underline{- 27} \phantom{00} \\ 50 \phantom{00} \\ \underline{- 45} \phantom{00} \\ 54 \phantom{00} \\ \underline{- 54} \phantom{00} \\ 0 \end{array}$$

(vii)  $0.125 \div 25$

We get

$0.125 \div 25 = 0.005$

$$\begin{array}{r} 0.005 \\ 25 \overline{) 0.125} \\ \underline{- 125} \phantom{00} \\ 0 \end{array}$$

(viii)  $0.14616 \div 72$

We get

$0.14616 \div 72 = 0.00203$

$$\begin{array}{r} 0.00203 \\ 72 \overline{) 0.14616} \\ \underline{- 144} \phantom{00} \\ 216 \phantom{00} \\ \underline{- 216} \phantom{00} \\ 0 \end{array}$$

(ix)  $0.6227 \div 1300$

We get

$0.6227 \div 1300 = 0.000479$

$$\begin{array}{r}
 0.000479 \\
 1300 \overline{) 0.6227} \\
 \underline{- 5200} \phantom{00} \\
 10270 \phantom{00} \\
 \underline{- 9100} \phantom{00} \\
 11700 \phantom{00} \\
 \underline{- 11700} \phantom{00} \\
 0
 \end{array}$$

(x)  $257.894 \div 0.169$   
 Multiplying by 1000  
 $257894 \div 169 = 1526$

$$\begin{array}{r}
 1526 \\
 169 \overline{) 257894} \\
 \underline{- 169} \phantom{00} \\
 888 \phantom{00} \\
 \underline{- 845} \phantom{00} \\
 439 \phantom{00} \\
 \underline{- 338} \phantom{00} \\
 1014 \phantom{00} \\
 \underline{- 1014} \phantom{00} \\
 0
 \end{array}$$

(xi)  $6.3 \div (0.3)^2$   
 We can write it as  
 $= 6.3 \div (0.3 \times 0.3)$   
 By further calculation  
 $= 6.3 \div 0.09$   
 Multiply both sides by 100  
 $= 630 \div 9 = 70$

### 7. Evaluate:

(i)  $4.3 \times 0.52 \times 0.3$

(ii)  $3.2 \times 2.5 \times 0.7$

(iii)  $0.8 \times 1.5 \times 0.6$

(iv)  $0.3 \times 0.3 \times 0.3$

(v)  $1.2 \times 1.2 \times 0.4$

(vi)  $0.4 \times 0.04 \times 0.004$

(vii)  $0.5 \times 0.6 \times 0.7$

(viii)  $0.5 \times 0.06 \times 0.007$

**Solution:**

(i)  $4.3 \times 0.52 \times 0.3$

We know that

$$\begin{array}{r}
 0.52 \\
 \times \quad 4.3 \\
 \hline
 156 \\
 \times \quad 208 \\
 \hline
 2.236 \\
 \times \quad 0.3 \\
 \hline
 6708 \\
 \times \quad 0 \\
 \hline
 0.6708
 \end{array}$$

Here the sum of decimal places =  $1 + 2 + 1 = 4$

So we get

$$4.3 \times 0.52 \times 0.3 = 0.6708$$

(ii)  $3.2 \times 2.5 \times 0.7$

We know that

$$\begin{array}{r}
 3.2 \\
 \times \quad 2.5 \\
 \hline
 160 \\
 \times \quad 64 \\
 \hline
 8 \\
 \times \quad 0.7 \\
 \hline
 5600 \\
 \times \quad 0 \\
 \hline
 5.6
 \end{array}$$

Here the sum of decimal places =  $1 + 1 + 1 = 3$

So we get

$$3.2 \times 2.5 \times 0.7 = 5.600 \text{ or } 5.6$$

(iii)  $0.8 \times 1.5 \times 0.6$

We know that

$$\begin{array}{r}
 1.5 \\
 \times \quad 0.8 \\
 \hline
 120 \\
 \times \quad 0 \\
 \hline
 1.2 \\
 \times \quad 0.6 \\
 \hline
 720 \\
 \times \quad 0 \\
 \hline
 0.72
 \end{array}$$

Here the sum of decimal places =  $1 + 1 + 1 = 3$

So we get

$$0.8 \times 1.5 \times 0.6 = 0.720 \text{ or } 0.72$$

(iv)  $0.3 \times 0.3 \times 0.3$

We know that

$$\begin{array}{r} 0.3 \\ \times 0.3 \\ \hline 9 \\ \times 0 \\ \hline 0.09 \\ \times 0.3 \\ \hline 0.027 \end{array}$$

Here the sum of decimal places =  $1 + 1 + 1 = 3$

So we get

$$0.3 \times 0.3 \times 0.3 = 0.027$$

(v)  $1.2 \times 1.2 \times 0.4$

We know that

$$\begin{array}{r} 1.2 \\ \times 1.2 \\ \hline 0.24 \\ \times 12 \\ \hline 1.44 \\ \times 0.4 \\ \hline 576 \\ \times 0 \\ \hline 0.576 \end{array}$$

Here the sum of decimal places =  $1 + 1 + 1 = 3$

So we get

$$1.2 \times 1.2 \times 0.4 = 0.576$$

(vi)  $0.4 \times 0.04 \times 0.004$

We know that

$$\begin{array}{r} 0.004 \\ \times 0.04 \\ \hline 16 \\ 0000 \times \\ 0000 \times \times \\ \hline 0.00016 \\ \times 0.4 \\ \hline 0.000064 \end{array}$$

Here the sum of decimal places =  $1 + 2 + 3 = 6$

So we get

$$0.4 \times 0.04 \times 0.004 = 0.000064$$

(vii)  $0.5 \times 0.6 \times 0.7$

We know that

$$\begin{array}{r} 0.5 \\ \times 0.6 \\ \hline 0.3 \\ 00x \\ \hline 0.3 \\ \times 0.7 \\ \hline 210 \\ 000x \\ \hline 0.21 \end{array}$$

Here the sum of decimal places =  $1 + 1 + 1 = 3$

So we get

$$0.5 \times 0.6 \times 0.7 = 0.210 \text{ or } 0.21$$

(viii)  $0.5 \times 0.06 \times 0.007$

We know that

$$\begin{array}{r} 0.007 \\ \times 0.06 \\ \hline 0.00042 \\ \times 0.5 \\ \hline 0.00021 \end{array}$$

Here the sum of decimal places =  $1 + 2 + 3 = 5$

So we get

$$0.5 \times 0.06 \times 0.007 = 0.00021$$

### 8. Evaluate:

(i)  $(0.9)^2$

(ii)  $(0.6)^2 \times 0.5$

(iii)  $0.3 \times (0.5)^2$

(iv)  $(0.4)^3$

(v)  $(0.2)^3 \times 5$

(vi)  $(0.2)^3 \times 0.05$

**Solution:**

(i)  $(0.9)^2$

It can be written as

$$0.9 \times 0.9 = 0.81$$

Here the sum of decimal places is  $1 + 1 = 2$

(ii)  $(0.6)^2 \times 0.5$

It can be written as

$$= 0.6 \times 0.6 \times 0.5$$

On further calculation

$$= 0.36 \times 0.5$$

$$= 0.180 \text{ or } 0.18$$

Here the sum of decimal places is  $1 + 1 + 1 = 3$

(iii)  $0.3 \times (0.5)^2$

It can be written as

$$= 0.3 \times 0.5 \times 0.5$$

On further calculation

$$= 0.3 \times 0.25$$

$$= 0.075$$

Here the sum of decimal places is  $1 + 1 + 1 = 3$

(iv)  $(0.4)^3$

It can be written as

$$= 0.4 \times 0.4 \times 0.4$$

On further calculation

$$= 0.16 \times 0.4$$

$$= 0.064$$

Here the sum of decimal places is  $1 + 1 + 1 = 3$

(v)  $(0.2)^3 \times 5$

It can be written as

$$= 0.2 \times 0.2 \times 0.2 \times 5$$

On further calculation

$$= 0.008 \times 5$$

$$= 0.40 \text{ or } 0.4$$

Here the sum of decimal places is  $1 + 1 + 1 = 3$

(vi)  $(0.2)^3 \times 0.05$

It can be written as

$$= 0.2 \times 0.2 \times 0.2 \times 0.05$$

On further calculation

$$= 0.008 \times 0.05$$

$$= 0.00040$$

Here the sum of decimal places is  $1 + 1 + 1 + 1 + 1 = 5$

**9. Find the cost of 36.75 kg wheat at the rate of ₹12.80 per kg.**

**Solution:**

It is given that

Weight of wheat = 36.75 kg

Cost of wheat per kg = ₹12.80

So the cost of 36.75 kg wheat =  $36.75 \times 12.80 = ₹470.40$

$$\begin{array}{r} 36.75 \\ \times 12.80 \\ \hline 470.4 \end{array}$$

**10. The cost of a pen is ₹56.15. Find the cost of 16 such pens.**

**Solution:**

It is given that

Cost of a pen = ₹56.15

So the cost of 16 such pens =  $16 \times 56.15 = ₹898.40$

$$\begin{array}{r} 56.15 \\ \times 16 \\ \hline 898.4 \end{array}$$

**11. Evaluate:**

(i)  $0.0072 \div 0.06$

(ii)  $0.621 \div 0.3$

(iii)  $0.0532 \div 0.005$

(iv)  $0.01162 \div 0.14$

(v)  $(7.5 \times 40.4) \div 25$

(vi)  $2.1 \div (0.1 \times 0.1)$

**Solution:**

(i)  $0.0072 \div 0.06$

Multiplying both numerator and denominator by 100

$$= (0.0072 \times 100) / (0.06 \times 100)$$

On further calculation

$$= 0.72/6$$

$$= 0.12$$

(ii)  $0.621 \div 0.3$

Multiplying both numerator and denominator by 10

$$= (0.621 \times 10) / (0.3 \times 10)$$

On further calculation

$$= 6.21/3$$

$$= 2.07$$

(iii)  $0.0532 \div 0.005$

Multiplying both numerator and denominator by 1000

$$= (0.0532 \times 1000) / (0.005 \times 1000)$$

On further calculation

$$= 53.2/5$$

$$= 10.64$$

(iv)  $0.01162 \div 0.14$

Multiplying both numerator and denominator by 100

$$= (0.01162 \times 100) / (0.14 \times 100)$$

On further calculation

$$= 1.162/14$$

$$= 0.083$$

(v)  $(7.5 \times 40.4) \div 25$

It can be written as

$$= 303/25$$

$$= 12.12$$

(vi)  $2.1 \div (0.1 \times 0.1)$

Multiplying both numerator and denominator by 100

$$= (2.1 \times 100) / (0.01 \times 100)$$

On further calculation

$$= 210/1$$

$$= 210$$

**12. Fifteen identical articles weigh 31.50 kg. Find the weight of each article.**

**Solution:**

It is given that

Total weight of 15 identical articles = 31.50 kg

So the weight of each article =  $31.50 \div 15 = 2.1$  kg

Hence, the weight of each article is 2.1 kg.

**13. The product of two numbers is 211.2. If one of these two numbers is 16.5, find the other number.**

**Solution:**

It is given that

Product of two numbers = 211.2

One of the two numbers = 16.5

So the other number =  $211.2 \div 16.5$

On further calculation

$$= (211.2 \times 10) / (16.5 \times 10)$$

So we get

$$= 2112/165$$

$$= 12.8$$

**14. One dozen identical articles cost ₹45.96. Find the cost of each article.**

**Solution:**

It is given that

Cost of one dozen articles = ₹45.96

We know that one dozen = 12

So the cost of one article =  $45.96 \div 12 = ₹3.83$