

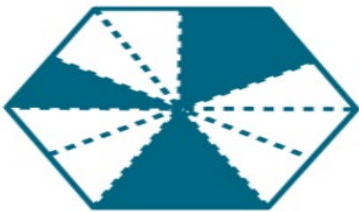
1. What fraction of each of the following figure is shaded?



(i)



(ii)



(iii)



(iv)

**Solution:**

(i) In the given figure, the shaded fraction is  $2 / 8 = 1 / 4$

(ii) In the given figure, the shaded fraction is  $3 / 10$

(iii) In the given figure, the shaded fraction is  $5 / 12$

(iv) In the given figure, the shaded fraction is  $7 / 13$

2. Evaluate the following:

(i)  $(4 / 3) + (7 / 8)$

(ii)  $8\frac{1}{2} - 3\frac{5}{8}$

(iii)  $(5 / 12) + (1 / 18) - (2 / 9)$

**Solution:**

(i)  $(4 / 3) + (7 / 8)$

L.C.M. of 3, 8 is 24, we get,  
 $= (32 + 21) / 24$   
 $= 53 / 24$

We get,

$= 2\frac{5}{24}$

(ii)  $8\frac{1}{2} - 3\frac{5}{8}$

This can be written as,

$= (17 / 2) - (29 / 8)$

L.C.M. of 2, 8 is 8, we get,

$$= (68 - 29) / 8$$

$$= 39 / 8$$

We get,

$$= 4\frac{7}{8}$$

(iii)  $(5 / 12) + (1 / 18) - (2 / 9)$

L.C.M. of 12, 18, 9 is 36, we get,

$$= (15 + 2 - 8) / 36$$

$$= (17 - 8) / 36$$

$$= 9 / 36$$

Dividing both numerator and denominator by 9, we get,

$$= (9 \div 9) / (36 \div 9)$$

We get,

$$= 1 / 4$$

### 3. Evaluate the following:

(i)  $7 \times (3 / 5)$

(ii)  $21 \times (3 / 14)$

(iii)  $3\frac{2}{5} \times 8$

(iv)  $5 \times 6\frac{3}{4}$

**Solution:**

(i)  $7 \times (3 / 5)$

On simplification, we get,

$$= 21 / 5$$

$$= 4\frac{1}{5}$$

(ii)  $21 \times (3 / 14)$

On further calculation, we get,

$$= 9 / 12$$

$$= 4\frac{1}{2}$$

(iii)  $3\frac{2}{5} \times 8$

This can be written as,

$$= (17 / 5) \times 8$$

On calculating further, we get,

$$= 136 / 5$$

$$= 27\frac{1}{5}$$

$$(iv) 5 \times 6\frac{3}{4}$$

This can be written as,

$$= 5 \times (27 / 4)$$

$$= 135 / 4$$

We get,

$$= 33\frac{3}{4}$$

**4. Find the reciprocal of each of the following:**

(i)  $3 / 7$

(ii)  $13 / 9$

(iii)  $8$

**Solution:**

(i) The reciprocal of  $3 / 7$  is  $7 / 3$

(ii) The reciprocal of  $13 / 9$  is  $9 / 13$

(iii) The reciprocal of  $8$  is  $1 / 8$

**5. Write the following numbers in the expanded form:**

(i)  $20.03$

(ii)  $200.03$

(iii)  $2.034$

**Solution:**

(i)  $20.03$

The expanded form of the given decimal is shown below,

$$= 2 \times 10 + 0 \times 1 + 0 \times (1 / 10) + 3 \times (1 / 100)$$

(ii)  $200.03$

The expanded form of the given decimal is shown below,

$$= 2 \times 100 + 0 \times 10 + 0 \times 1 + 0 \times (1 / 10) + 3 \times (1 / 100)$$

(iii)  $2.034$

The expanded form of the given decimal is shown below,

$$= 2 \times 1 + 0 \times (1 / 10) + 3 \times (1 / 100) + 4 \times (1 / 1000)$$

**6. Find the following:**

(i)  $2.7 \times 4$

(ii)  $2.71 \times 5$

(iii)  $2.5 \times 0.3$

(iv)  $2.3 \times 4.35$

(v)  $238.06 \times 7.5$

(vi)  $0.79 \times 32.4$

(vii)  $1.07 \times 0.02$

(viii)  $10.05 \times 1.05$

**Solution:**

(i)  $2.7 \times 4$

$$= (27 / 10) \times 4$$

$$= 108 / 10$$

$$= 10.8$$

(ii)  $2.71 \times 5$

On calculation, we get,

$$= (271 / 100) \times 5$$

$$= 1355 / 100$$

We get,

$$= 13.55$$

(iii)  $2.5 \times 0.3$

On further calculation, we get,

$$= (25 / 10) \times (3 / 10)$$

$$= 75 / 100$$

We get,

$$= 0.75$$

(iv)  $2.3 \times 4.35$

On further calculation, we get,

$$= (23 / 10) \times (435 / 100)$$

$$= 10005 / 1000$$

We get,

$$= 10.005$$

(v)  $238.06 \times 7.5$

On simplification, we get,

$$= (23806 / 100) \times (75 / 10)$$

$$23806$$

$$\times 75$$

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$$119030$$

$$1666420$$

$$\begin{array}{r} \hline 1785450 \\ \hline \end{array}$$

$$= 1785450 / 1000$$

We get,  
 $= 1785.45$

(vi)  $0.79 \times 32.4$

On further calculation, we get,

$$= (79 / 100) \times (324 / 10)$$

$$\begin{array}{r} 324 \\ \times 79 \\ \hline \end{array}$$

$$\begin{array}{r} 2916 \\ 22680 \\ \hline 25596 \end{array}$$

$$= 25596 / 1000$$

We get,  
 $= 25.596$

(vii)  $1.07 \times 0.02$

On simplification, we get,

$$= (107 / 100) \times (2 / 100)$$

$$= 214 / 10000$$

We get,  
 $= 0.0214$

(viii)  $10.05 \times 1.05$

On calculating, we get,

$$= (1005 / 100) \times (105 / 100)$$

$$\begin{array}{r} 1005 \\ \times 105 \\ \hline \end{array}$$

$$\begin{array}{r} 5025 \\ 100500 \\ \hline \end{array}$$

$$\begin{array}{r} 105525 \end{array}$$

$$= \frac{105525}{10000}$$

We get,  
= 10.5525

**7. Simplify the following:**

(i)  $(3/5)$  of  $1\frac{1}{9} + 3\frac{1}{2}$

(ii)  $(4/5) \times 2\frac{3}{8} - 2 \times (3/5)$

(iii)  $\{(4/5) + 2\} \{3 - (2/3)\}$

**Solution:**

(i)  $(3/5)$  of  $1\frac{1}{9} + 3\frac{1}{2}$

This can be written as,

$$= (3/5) \text{ of } (10/9) + (7/2)$$

$$= (3/5) \times (10/9) + (7/2)$$

We get,

$$= (2/3) + (7/2)$$

L.C.M. of 3, 2 is 6, we get,

$$= (4 + 21) / 6$$

$$= 25 / 6$$

$$= 4\frac{1}{6}$$

(ii)  $(4/5) \times 2\frac{3}{8} - 2 \times (3/5)$

This can be written as,

$$= (4/5) \times (19/8) - 2 \times (3/5)$$

We get,

$$= (19/10) - (6/5)$$

L.C.M. of 10, 5 is 10, we get,

$$= (19 - 12) / 10$$

We get,

$$= (7/10)$$

(iii)  $\{(4/5) + 2\} \{3 - (2/3)\}$

On simplification, we get,

$$= \{(4 + 10) / 5\} \times \{(9 - 2) / 3\}$$

$$= (14/5) \times (7/3)$$

$$= (14 \times 7) / (5 \times 3)$$

We get,

$$= 98 / 15$$
$$= 6 \frac{8}{15}$$

