

CHAPTER - 4

Multiplication

Exercise - 1

1. Fill in the blanks:

(a) $185 \times 1 = \boxed{185}$

(b) $\boxed{270} \times 1 = 270$

(c) $928 \times 175 = 175 \times \boxed{928}$

(d) $1078 \times \boxed{928} = 928 \times 1078$

(e) $138 \times (413 \times 644) = (138 \times \boxed{413}) \times 644$

(f) $427 \times (25 + \boxed{68}) = 427 \times 25 + 427 \times 68$

2. Multiply the following in three different ways.

(a) $5 \times 8 \times 4$

Solve:- $(5 \times 8) \times 4$

$= 40 \times 4 = 160$ Ans.

(6.) $11 \times 4 \times 7$

(C.) $14 \times 9 \times 3$

Solve:- $(11 \times 4) \times 7$

Solve:- $(14 \times 9) \times 3$

$= 44 \times 7 = 308$ Ans.

$= 126 \times 3$
 $= 378$ Ans.

3. Find the product using distributive property.

(a) $(5+6) \times 9$

Solve:- $(5 \times 9) + (6 \times 9)$

$= 45 + 54$

$= 99$ Ans.

(b) $(11+8) \times 7$

Solve:- $(11 \times 7) + (8 \times 7)$

$= 77 + 56$

$= 133$ Ans.

(C) $(15+6) \times 6$

Solve:- $(15 \times 6) + (6 \times 6)$

$= 90 + 36$

$= 126$ Ans.

$$(d) \quad 4 \times (23 + 5)$$

$$\text{solve: } (4 \times 23) + (4 \times 5)$$

$$= 92 + 20$$

$$= 112 \text{ Ans.}$$

$$(e) \quad 5 \times (48 + 11)$$

$$\text{solve: } (5 \times 48) + (5 \times 11)$$

$$= 240 + 55$$

$$= 295 \text{ Ans.}$$

$$(f) \quad 6 \times (26 + 7)$$

$$\text{solve: } (6 \times 26) + (6 \times 7)$$

$$= 156 + 42$$

$$= 198$$

Exercise - 2

Find the product using expanded notation.

(1.) 15×6

Solve: $(10 + 5) \times 6$

$$= (10 \times 6) + (5 \times 6)$$

$$= 60 + 30 = 90 \text{ Ans.}$$

(2.) 5×43

Solve: $5 \times (40 + 3)$

$$= (5 \times 40) + (5 \times 3)$$

$$= 200 + 15 = 215 \text{ Ans.}$$

(3.) 39×8

Solve: $(30 + 9) \times 8$

$$= (30 \times 8) + (9 \times 8)$$

$$= 240 + 72 = 312$$

(4.) 27×9

Solve! $(20 + 7) \times 9$

$= (20 \times 9) + (7 \times 9)$

$= 180 + 63 = 243$ Ans.

(5.) 115×3

Solve! $(100 + 10 + 5) \times 3$

$= (100 \times 3) + (10 \times 3) + (5 \times 3)$

$= 300 + 30 + 15 = 345$ Ans.

(6.) 455×2

Solve! $(400 + 50 + 5) \times 2$

$= (400 \times 2) + (50 \times 2) + (5 \times 2)$

$= 800 + 100 + 10 = 910$ Ans.

(7.) 9×515

Solve! $9 \times (500 + 10 + 5)$

$= (9 \times 500) + (9 \times 10) + (9 \times 5)$

$= 4500 + 90 + 45 = 4635$ Ans.

(8.) 325×7

Solve: $(300 + 20 + 5) \times 7$

$= (300 \times 7) + (20 \times 7) + (5 \times 7)$

$= 2100 + 140 + 35 = 2275$ Ans.

(9.) 1935×6

Solve: $(1000 + 900 + 30 + 5) \times 6$

$= (1000 \times 6) + (900 \times 6) + (30 \times 6) + (5 \times 6)$

$= 6000 + 5400 + 180 + 30 = 11610$ Ans.

(10.) 3×6705

Solve: $3 \times (6000 + 700 + 5)$

$= (3 \times 6000) + (3 \times 700) + (3 \times 5)$

$= 18000 + 2100 + 15 = 20115$ Ans.

(11.) 2005×5

Solve: $(2000 + 5) \times 5$

$= (2000 \times 5) + (5 \times 5)$

$= 10000 + 25 = 10025$ Ans.

(12.) 8903×6

Solve: $(8000 + 900 + 3) \times 6$

$= (8000 \times 6) + (900 \times 6) + (3 \times 6)$

$= 48000 + 5400 + 18 = 53418$

Exercise - 3

1. Fill in the blanks:

(a.) $47 \times 10 = \boxed{470}$

(b.) $52178 \times 10 = \boxed{521780}$

(c.) $68 \times 100 = \boxed{6800}$

(d.) $499 \times 100 = \boxed{49900}$

(e.) $928 \times 1000 = \boxed{928000}$

(f.) $91 \times 1000 = \boxed{91000}$

2. Find each of the following products:

(a) 59×30

Solve: $59 \times 3 \times 10$

$= (59 \times 3) \times 10$

$= 177 \times 10 = 1770$ Ans.

(b) 297×50

Solve: $297 \times 5 \times 10$

$= (297 \times 5) \times 10$

$= 1485 \times 10 = 14850$ Ans.

(c) 1225×20

Solve: $1225 \times 2 \times 10$

$= (1225 \times 2) \times 10$

$= 2450 \times 10 = 24500$ Ans.

(d) 627×500

Solve: $627 \times 5 \times 100$

$= (627 \times 5) \times 100$

$= 3135 \times 100 = 313500$ Ans.

(e.) 99×200

Solve:- $99 \times 2 \times 100$

$= (99 \times 2) \times 100$

$= 198 \times 100 = 19800 \text{ Ans.}$

(f.) 136×400

Solve:- $136 \times 4 \times 100$

$= (136 \times 4) \times 100$

$= 544 \times 100 = 54400 \text{ Ans.}$

(g.) 44×4000

Solve:- $44 \times 4 \times 1000$

$= (44 \times 4) \times 1000$

$= 176 \times 1000 = 176000 \text{ Ans.}$

(h.) 1203×700

Solve:- $1203 \times 7 \times 100$

$= (1203 \times 7) \times 100$

$= 8421 \times 100 = 842100 \text{ Ans.}$

(2) 109×6000

Solve: $109 \times 6 \times 1000$

$= (109 \times 6) \times 1000$

$= 654 \times 1000 = 654000$ Ans.

3. Using suitable grouping, find the product:

(a) $5 \times 97 \times 20$

Solve: $97 \times (5 \times 20)$

$= 97 \times 100 = 9700$ Ans.

(b) $45 \times 4 \times 125$

Solve: $45 \times (4 \times 125)$

$= 45 \times 500 = 22500$

(c) $2 \times 627 \times 50$

Solve: $627 \times (2 \times 50)$

$= 627 \times 100 = 62700$ Ans.

(d.) $8 \times 36 \times 125$

Solve! $36 \times (8 \times 125)$

$= 36 \times 1000 = 36000$ Ans.

(e.) $729 \times 4 \times 25$

Solve! $729 \times (4 \times 25)$

$= 729 \times 100 = 72900$ Ans.

(f.) $4 \times 72 \times 125$

Solve! $72 \times (4 \times 125)$

$= 72 \times 500 = 36000$ Ans.

Exercise - 4

Multiply the following:-

(1.)

Th	H	T	O
①	②		
9	4	7	
X		3	
2	8	4	1

2841 Ans

(2.)

Th	H	T	O
②	②		
8	6	5	
X		4	
3	4	6	0

3460 Ans

$$\begin{array}{r}
 \text{(3.) Th H T O} \\
 \textcircled{2} \textcircled{4} \\
 935 \\
 \times \quad 8 \\
 \hline
 7480 \text{ Ans.}
 \end{array}$$

Exercise - 5

Multiply the following:

$$\begin{array}{r}
 \text{(1.) Th H T O} \\
 2311 \\
 \times \quad 2 \\
 \hline
 4622 \text{ Ans.}
 \end{array}$$

$$\begin{array}{r}
 \text{(2.) Th H T O} \\
 1310 \\
 \times \quad 3 \\
 \hline
 3930 \text{ Ans.}
 \end{array}$$

$$\begin{array}{r}
 \text{(3.) Th H T O} \\
 1221 \\
 \times \quad 4 \\
 \hline
 4884 \text{ Ans.}
 \end{array}$$

$$\begin{array}{r}
 \text{(4.) Th H T O} \\
 \textcircled{0} \textcircled{0} \textcircled{2} \\
 1015 \\
 \times \quad 5 \\
 \hline
 5075 \text{ Ans.}
 \end{array}$$

$$\begin{array}{r}
 \text{(5.) Th H T O} \\
 \textcircled{0} \textcircled{2} \textcircled{4} \\
 1138 \\
 \times \quad 6 \\
 \hline
 6828 \text{ Ans.}
 \end{array}$$

$$\begin{array}{r}
 \text{(6.) Th H T O} \\
 \textcircled{3} \textcircled{2} \textcircled{0} \\
 1981 \\
 \times \quad 4 \\
 \hline
 7924 \text{ Ans.}
 \end{array}$$

Exercise - 6

1. Multiply:

(a) Th H T O

34

$\times 12$

68

+ 340

408 Ans.

(b) Th H T O

49

$\times 25$

245

+ 98

343 Ans.

(c) Th H T O

73

$\times 37$

511

+ 219

730 Ans.

(d) Th H T O

98

$\times 43$

294

+ 392

686 Ans.

2. One box contains 48 chocolates. How many chocolates are there in 36 such boxes?

Solution - Total Number of chocolates

$$= 48 \times 36$$

$$= 1728$$

$$\begin{array}{r} 48 \\ \times 36 \\ \hline 288 \\ + 1440 \\ \hline 1728 \end{array}$$

3. The price of 1 notebook is ₹ 28. How much will the shopkeeper get if he sells 2 dozen notebooks in a day?

Solve:- 2 dozen notebooks = $2 \times 12 = 24$ notebooks

Total cost of 24 notebooks

28

$$= ₹ 28 \times 24 = ₹ 672$$

$\times 24$

112

Thus, the shopkeeper will

+ 560

get ₹ 672.

672

4. Sujata pasted 35 stickers on each page of her notebook. How many stickers did she paste in all if she used 15 pages in total?

Solution:- Total number of stickers = 35×15
= 525

35

$\times 15$

175

+ 350

525

Thus, Sujata pasted 525 stickers in all.

5. There are 24 desks in each classroom of a school. Find the total number of desks if there are 18 classrooms in the school.

Solution:- Total number of desks

$$= 24 \times 18$$

$$= 432$$

Thus, the total number of desks is 432.

$$\begin{array}{r} 24 \\ \times 18 \\ \hline 192 \\ + 240 \\ \hline 432 \end{array}$$

Exercise - 7

Multiply:

1. 819 by 80

(2.) 648 by 27

Solve:-

$$\begin{array}{r} 819 \\ \times 80 \\ \hline 000 \end{array}$$

$$+ 65520$$

$$\hline 65520 \quad \text{Ans.}$$

Solve:-

$$\begin{array}{r} 648 \\ \times 27 \end{array}$$

$$\hline 13448$$

$$+ 605160$$

$$\hline 618608 \quad \text{Ans.}$$

(3.) $555 \text{ by } 145$

Solve:-

$$\begin{array}{r} 555 \\ \times 145 \\ \hline 2775 \\ 22200 \\ + 55500 \\ \hline 80475 \end{array} \text{ Ans.}$$

(4.) $6724 \text{ by } 92$

Solve:-

$$\begin{array}{r} 6724 \\ \times 92 \\ \hline 13448 \\ + 605160 \\ \hline 618608 \end{array} \text{ Ans.}$$

(5.) $7134 \text{ by } 76$

Solve:-

$$\begin{array}{r} 7134 \\ \times 76 \\ \hline 42804 \\ + 499380 \\ \hline 542184 \end{array}$$

(6.) $1732 \text{ by } 48$

Solve:-

$$\begin{array}{r} 1732 \\ \times 48 \\ \hline 13856 \\ + 69280 \\ \hline 83136 \end{array}$$

(7.) $2547 \text{ by } 87$

Solve:-

$$\begin{array}{r} 2547 \\ \times 87 \\ \hline 17829 \\ + 203760 \\ \hline 221589 \end{array}$$

(8.) $245 \text{ by } 155$

Solve:-

$$\begin{array}{r} 245 \\ \times 155 \\ \hline 1225 \\ 12250 \\ + 24500 \\ \hline 37975 \end{array}$$

(9.) $679 \text{ by } 234$

Soln:-

$$\begin{array}{r}
 679 \\
 \times 234 \\
 \hline
 2716 \\
 20370 \\
 +135800 \\
 \hline
 158886 \quad \text{Ans.}
 \end{array}$$

Exercise - 8

(1.) The cost of a chair is ₹ 485. Find the cost of 24 such chairs?

Solution:- Cost of a chair = ₹ 485

∴ Total cost of 24 chairs

$$= ₹ 485 \times 24$$

$$= ₹ 11640$$

Thus, the total cost of

24 chairs is ₹ 11640.

$$\begin{array}{r}
 485 \\
 \times 24 \\
 \hline
 1940 \\
 + 9700 \\
 \hline
 11640
 \end{array}$$

2. A DVD player costs ₹ 2485. What is the cost of 32 such DVD players?

Solution:- Cost of one DVD player

$$= ₹ 2485$$

∴ Total cost of 32 DVD

$$\text{players} = ₹ 2485 \times 32$$

$$= ₹ 79,520$$

Hence, total cost of DVD

players is ₹ 79,520

$$\begin{array}{r} 2485 \\ \times 32 \\ \hline 4970 \\ + 74550 \\ \hline 79520 \end{array}$$

3. The weight of a box is 8485 grams. What is the total weight of 45 such boxes?

Solution:- Weight of a box

$$= 8485 \text{ g}$$

∴ Total weight of 45 boxes

$$= (8485 \times 45) \text{ g}$$

$$= 381825 \text{ g}$$

Hence, total weight of 45

boxes is 381825 g.

$$\begin{array}{r} 8485 \\ \times 45 \\ \hline 42425 \\ + 339400 \\ \hline 381825 \end{array}$$

4. The monthly fee is ₹ 2550 per student. How much fees will a student pay in one year?

Solution:- The monthly fees of each student = ₹ 2550

The fees paid by each

student in a year

$$= ₹ 2550 \times 12$$

$$= ₹ 30,600$$

Hence, the total student

will pay ₹ 30,600 as fees in a year

$$2550$$

$$\times 12$$

$$5100$$

$$+ 25500$$

$$30600$$

5. The weight of one watermelon is 3458 grams. How much will 24 such watermelons weigh?

Solution:- Weight of one watermelon

$$= 3458 \text{ g.}$$

∴ Total weight of 24 watermelons

$$= (3458 \times 24) \text{ g.}$$

Hence, the total weight of 24 watermelons is 82992 g.

$$3458$$

$$\times 24$$

$$13832$$

$$+ 69160$$

$$82992$$

6. How many hours are there in one year

Solution:- Total number of hours in one year

$$= 365 \times 24 \text{ (1 year = 365 days)}$$

$$= 8760 \text{ (1 day = 24 hours)}$$

Hence, there are 8760 hours
in one year

$$\begin{array}{r} 365 \\ \times 24 \\ \hline 1460 \\ + 7300 \\ \hline 8760 \end{array}$$

7. A football weighs 288 grams. what
is the weight of 175 such foot balls

Solution:- Weight of one football

$$= 288 \text{ g}$$

$\therefore$ Total weight of 175

$$\text{footballs} = (288 \times 175) \text{ g}$$

$$= 50400 \text{ g}$$

$$\begin{array}{r} 288 \\ \times 175 \\ \hline 1440 \\ 20160 \end{array}$$

Hence, the total weight

of 175 foot balls is 50400 g.

$$\begin{array}{r} 20160 \\ + 28800 \\ \hline 50400 \end{array}$$