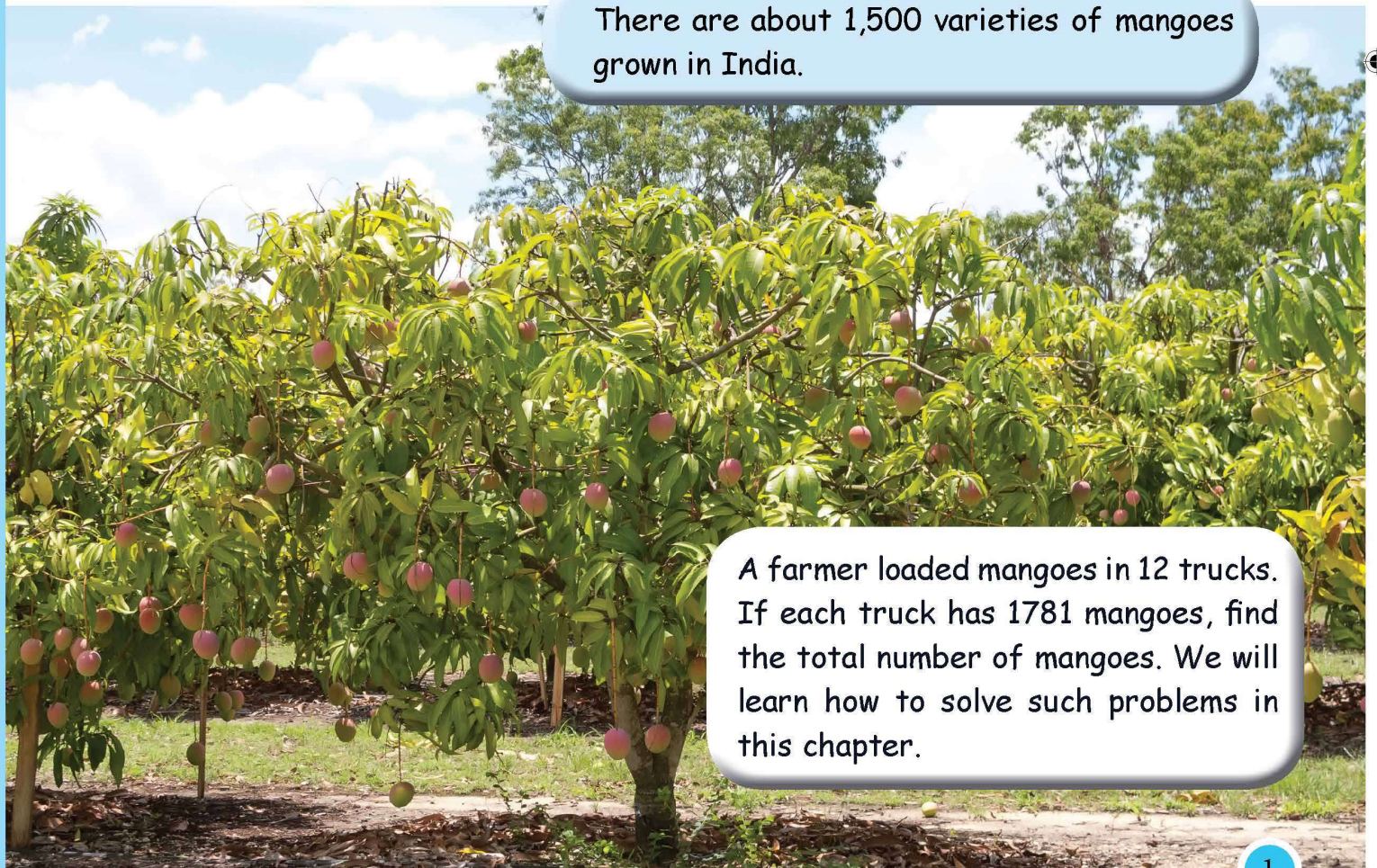# 1. MULTIPLICATION

India is called as the 'Mango Capital of the World'. Mango is the national fruit of India.

There are about 1,500 varieties of mangoes grown in India.

A farmer loaded mangoes in 12 trucks. If each truck has 1781 mangoes, find the total number of mangoes. We will learn how to solve such problems in this chapter.

HOME-SCHOOL CONNECT

To my parents, in this new chapter I will learn to:

Learning goals

- Multiply a 4-digit by a 1-digit number
- Multiply a 4-digit by a 2-digit number
- Multiply a 3-digit by a 3-digit number
- Multiply a 5-digit by a 1-digit number
- State the properties of multiplication
- Multiply by 10, 100 and 1000
- Solve word problems on multiplication

Maths Vocabulary

Multiplicand:
The number to be multiplied is known as the multiplicand.

Multiplier:
The number by which the multiplicand is to be multiplied is called multiplier.

Product:
The answer we get by multiplying the multiplicand and multiplier is called as the product.

Home - Activity

Encourage your child to find 3-digit, 4-digit, 5-digit numbers by looking around. Ask them to multiply the number with the number of your choice.

Multiplication of a 2-digit number by a 2-digit number

Example 1: Multiply 24 × 12

Th	H	T	O
		2	4
	×	1	2
		4	8	→ 24 × 2
+	2	4	0	→ 24 × 10
	2	8	8

Example 2: Multiply 42 × 26

Th	H	T	O
		①	
		4	2
	×	2	6
	2	5	2	→ 42 × 6
+	8	4	0	→ 42 × 20
1	0	9	2

Multiplication of a 3-digit by a 1-digit number

Example 1: Multiply 213 by 3.

Th	H	T	O
	2	1	3
	×		3
	6	3	9

Example 2: Multiply 642 by 4.

Th	H	T	O
	①		
	6	4	2
	×		4
2	5	6	8

Multiplication of a 3-digit by a 2-digit number

Example 1: Multiply 342 by 21.

Th	H	T	O
	3	4	2
	×	2	1
	3	4	2	→ 342 × 1
+	6	8	4	0	→ 342 × 20
	7	1	8	2

Example 2: Multiply 636 by 43.

Th	H	T	O
	①	②	
	①	①	
	6	3	6
	×	4	3
	1	9	0	8	→ 636 × 3
+	2	5	4	4	0	→ 636 × 40
	2	7	3	4	8

STORY SUMS

A shopkeeper sells eggs in trays. Each tray contains 12 eggs. He sold 26 trays of eggs. How many eggs did he sell?

Number of eggs in 1 tray = 12

Number of trays sold = 26

Total number of eggs sold = 12 × 26
Therefore, total number of eggs sold is 312.

```
  H  T  O
     2  6
×  1  2
─────────
     5  2
  2  6  0
─────────
  3  1  2
```

CHECK WHAT YOU KNOW

Multiply:

a.
H	T	O
	4	5
×	1	9

b.
H	T	O
	8	3
×	1	1

c.
H	T	O
1	2	8
×		8

d.
H	T	O
4	5	1
×		4

e.
H	T	O
7	3	5
×	2	2

f.
H	T	O
3	4	6
×	9	3

g.
H	T	O
6	3	1
×	3	5

h.
H	T	O
6	3	1
×	4	8

Arrange vertically and multiply:

a. 67 × 45	b. 49 × 12	c. 82 × 27	d. 646 × 5
e. 384 × 7	f. 128 × 24	g. 365 × 78	h. 765 × 26

Solve the following:

a. A box contains 24 laddoos. How many laddoos will there be in 15 such boxes?

b. A bottle costs ₹ 399. Find the cost of 6 such bottles.

c. An arrangement consists of 22 red roses. For an event, 268 such arrangements were used. Find the total number of roses used.

d. Ritvik gets ₹ 550 for 1 hour of work. How much money will he get if he works for 21 hours?

e. A Math textbook contains 240 pages. How many pages will there be in 23 such books?
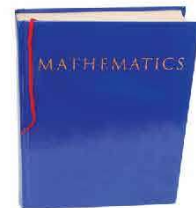
1.1 Multiplication of a 4-digit number by a 1-digit number

Multiplication of a 4-digit number by a 1-digit number without regrouping

Example: Multiply 1312 by 3.

Step 1

Multiply 2 by 3.
$2 \times 3 = 6$

Th	H	T	O
1	3	1	2
		×	3
			6

Step 2

Multiply 1 by 3.
$1 \times 3 = 3$

Th	H	T	O
1	3	1	2
		×	3
		3	6

Step 3

Multiply 3 by 3.
$3 \times 3 = 9$

Th	H	T	O
1	3	1	2
		×	3
	9	3	6

Step 4

Multiply 1 by 3.
$1 \times 3 = 3$

Th	H	T	O
1	3	1	2
		×	3
3	9	3	6

Therefore, $1312 \times 3 = 3936$

Multiplication of a 4-digit number by a 1-digit number with regrouping

Example 1: Multiply 1456 by 3

Step 1

Multiply 6 by 3
$6 \times 3 = 18$
Write 8 in the ones place and carry 1 to the tens place.

Th	H	T	O
		①	
1	4	5	6
		×	3
			8

Step 2

Multiply 5 by 3
$5 \times 3 = 15$.
15 + 1 (carry over) = 16
Write 6 in the tens place and carry 1 to the hundreds place.

Th	H	T	O
	①	①	
1	4	5	6
		×	3
		6	8

Step 3

Multiply 4 by 3
$4 \times 3 = 12$.
12 + 1 (carry over) = 13.
Write 3 in the hundreds place and carry 1 to the thousands place.

Th	H	T	O
①	①	①	
1	4	5	6
		×	3
	3	6	8

Step 4

Multiply 1 by 3
$1 \times 3 = 3$.
3 + 1 (carry over) = 4.
Write 4 in the thousands place.

Th	H	T	O
①	①	①	
1	4	5	6
		×	3
4	3	6	8

Therefore, $1456 \times 3 = 4368$

Example 2: Multiply 6587 by 7.

Step 1

Multiply 7 by 7
$7 \times 7 = 49$.
Write 9 in the ones place.
Carry 4 to the tens place.

TTh	Th	H	T	O
			④	
	6	5	8	7
			×	7
				9

Step 2

Multiply 8 by 7
$8 \times 7 = 56$.
56 + 4 (carry over) = 60
Write 0 in the tens place.
Carry 6 to the hundreds place.

TTh	Th	H	T	O
		⑥	④	
	6	5	8	7
			×	7
			0	9

Step 3

Multiply 5 by 7
$5 \times 7 = 35$.
35 + 6 (carry over) = 41
Write 1 in the hundreds place.
Carry 4 to the thousands place.

TTh	Th	H	T	O
	④	⑥	④	
	6	5	8	7
			×	7
		1	0	9

Step 4

Multiply 6 by 7
$6 \times 7 = 42$.
42 + 4 (carry over) = 46
Write 6 in the thousands place and 4 in the ten thousands place.

TTh	Th	H	T	O
	④	⑥	④	
	6	5	8	7
			×	7
4	6	1	0	9

Answer: 6587 × 7 = 46109

VM *Use the 05 building block template from the kit to perform multiplication.*

CLASSWORK 1

✔ **Check**

Th	H	T	O
2	1	3	4
		×	2
4	2	6	8

Th	H	T	O
	①		
3	1	5	3
		×	3
9	4	5	9

Th	H	T	O
②	③	①	
2	6	9	4
		×	4
1	0	7	7	6

1. Multiply:

a.
TTh	Th	H	T	O
	4	2	3	3
×				2

b.
TTh	Th	H	T	O
	3	0	3	2
×				3

c.
TTh	Th	H	T	O
	1	4	5	2
×				2

d.
TTh	Th	H	T	O
	5	4	7	3
×				3

e.
TTh	Th	H	T	O
	1	4	7	5
×				7

f.
TTh	Th	H	T	O
	6	4	7	4
×				6

2. Arrange vertically and multiply:

a.	1432 × 2	b.	2312 × 3	c.	1024 × 2	d.	1635 × 4
e.	3746 × 6	f.	2637 × 9	g.	6735 × 3	h.	6273 × 3

HOMEWORK 1

1. Multiply:

a.
TTh	Th	H	T	O
	2	3	0	1
×				2

b.
TTh	Th	H	T	O
	3	1	2	1
×				3

c.
TTh	Th	H	T	O
	1	4	3	2
×				2

d.
TTh	Th	H	T	O
	1	5	1	2
×				3

e.
TTh	Th	H	T	O
	3	5	1	9
×				8

f.
TTh	Th	H	T	O
	7	5	8	3
×				9

2. Arrange vertically and multiply:

a.	4031 × 2	b.	2113 × 3	c.	4133 × 2	d.	2346 × 4
e.	5671 × 7	f.	3746 × 4	g.	7364 × 9	h.	2736 × 6

1.2 Properties of Multiplication

Order property of multiplication

Changing the order of the multiplicand and multiplier does not change the product.

Examples:

a. 24 x 19 = 19 x 24 = 456

b. 234 x 25 = 5850 = 25 x 234

Zero property of multiplication

When we multiply a number by 0, the product is always 0.

Examples:

a. 2434 x 0 = 0

b. 7484 x 0 = 0

Multiplicative property of 1

When we multiply a number by 1, the product is always equal to that number.

Examples:

a. 6756 x 1= 6756

b. 3654 x 1= 3654

CLASSWORK 2

1. Fill in the missing numbers:

a. 12 x 32 = 32 x ____

b. 27 x ____ = 17 x 27

c. ____ x 48 = ____ x 21

d. ____ x 25 = ____ x 32

e. 82 x ____ = 94 x ____

f. 17 x 15 = 15 x ____

2. Find the product.

a. 0 x 244 = ____

b. 0 x 329 = ____

c. 123 x 0 = ____

d. 346 x 0 = ____

e. 85 x 0 = ____

f. 0 x 65 = ____

3. Find the missing numbers.

a. 56 x 1 = _____   b. 312 x_____ = 312   c. _____ x 563 = 563

b. 399 x_____ = 399   e. _____x 1 = 678   f. 65 x 1 = _____

HOMEWORK 2

1. Fill in the blanks.

a. 21 x 23 = 23 x _____   b. 72 x _____ = 19 x 72   c. _____ x 84 = 12x _____

d._____x 52=24x _____   e. 89 x_____ = 49 x _____   f. 61 x 523 = 523 x _____

2. Find the product.

a. 0 x 204 = _____   b. 0 x 192 = _____   c. 143x 0 = _____

d. 365 x 0 = _____   e. 815 x 0 = _____   f. 0 x 455 = _____

3. Find the missing numbers.

a. 564 x 1 = _____   b. 308 x _____ = 308   c. _____ x 532 = 532

d. 919 x _____ = 919   e. _____ x 1 = 576   f. 765 x 1 = _____

Multiplication by 10 and its multiples

To multiply by 10, write the number followed by 0.

Example: 348 × 10= 3480

To multiply the given number by any multiple of 10, write 0 in the ones place and then multiply the given number by the remaining digit and write the product before 0.

Example: 262 × 20= 5240

139 × 50 = 6950

Multiplication by 100 and its multiples

To multiply by 100, write the number followed by two zeroes.

Example: 365 × 100 = 36500

To multiply a number by any multiple of 100, write two zeroes at the end and then multiply the number by the remaining digits and write the product before the zeroes.

Example: 474 × 400= 189600

379 × 300= 113700

Multiplication by 1000 and its multiples

To multiply by 1000, write the number followed by three zeroes.

758 × 1000= 758000

To multiply a number by any multiple of 1000, write three zeroes at the end and then multiply the number by the remaining digits and write the product before the zeroes.

159 × 3000= 477000   489 × 2000= 978000

✓ Check

234 x 10 = 2340	7381 x 100 =738100	372 x 1000 = 372000
635 x 30 = 19050	673 x 400 = 269200	486 x 6000 = 2916000

Find the product of the following numbers.

a. 1221 x 10   b. 1328 x 10   c. 2342 x 10   d. 3425 x 10
e. 553 x 200   f. 342 x 100   g. 328 x 300   h. 894 x 400
i. 534 x 1000   j. 414 x 2000   k. 185 x 4000   l. 615 x 2000

Challenge!

40 schools participated in an interschool sports event. Every school had 200 kids who participated. How many participants were there in all?

HOMEWORK 3

Find the product of the following numbers.

a. 21431 x 10   b. 35662 x 30   c. 69455 x 20   d. 14349 x 50
e. 5365 x 100   f. 3211 x 100   g. 3245 x 200   h. 1532 x 500
i. 325 x 200   j. 62 x 1000   k. 284 x 20   l. 468 x 50

Multiplication of a 4-digit number by 2-digit number without regrouping

> Multiply 4-digit number by 2-digit number without regrouping
> Multiply 4-digit number by 2-digit number with regrouping

Example: Multiply 1242 by 12.

Step 1

Multiply by ones.
Multiply 1242 by 2.

TTh	Th	H	T	O
	1	2	4	2
		×	1	2
	2	4	8	4
+				

1242 × 2

Step 2

Multiply by tens.
Multiply 1242 by 10.

TTh	Th	H	T	O
	1	2	4	2
		×	1	2
	2	4	8	4
+	1	2	4	2	0

1242 × 2
1242 × 10

Step 3

Add the products.

TTh	Th	H	T	O
	1	2	4	2
		×	1	2
	2	4	8	4
+	1	2	4	2	0
1	4	9	0	4

1242 × 2
1242 × 10
Product

Therefore, 1242 × 12 = 14904

Multiplication of a 4-digit number by a 2-digit number with regrouping

Example: Multiply 1652 by 23.

Step 1

Multiply by ones.
Multiply 1652 by 3.

TTh	Th	H	T	O
	1	6	5	2
		×	2	3
	4	9	5	6
+				

1652 × 3

Step 2

Multiply by tens.
Multiply 1242 by 20.

TTh	Th	H	T	O
	1	6	5	2
		×	2	3
	4	9	5	6
+	3	3	0	4	0

1652 × 3
1652 × 20

Step 3

Add the products.

TTh	Th	H	T	O
	1	6	5	2
		×	2	3
	4	9	5	6
+	3	3	0	4	0
3	7	9	9	6

1652 × 3
1652 × 20
Product

Therefore, 1652 × 23 = 37996

1. Multiply:

a.
TTh	Th	H	T	O
	2	3	1	1
×			1	2

b.
TTh	Th	H	T	O
	2	3	1	4
×			2	1

c.
TTh	Th	H	T	O
	1	1	2	3
×			3	2

d.
TTh	Th	H	T	O
	3	4	6	8
×			4	6

e.
TTh	Th	H	T	O
	4	6	2	7
×			8	7

f.
TTh	Th	H	T	O
	7	4	1	8
×			3	9

2. Arrange vertically and multiply:

a.	2312 x 11	b.	1023 x 23	c.	3333 x 33	d.	2102 x 42
e.	2837 x 18	f.	8372 x 24	g.	2837 x 69	h.	3837 x 58

HOMEWORK 4

1. Multiply:

a.
TTh	Th	H	T	O
	1	0	2	4
×			2	2

b.
TTh	Th	H	T	O
	2	1	2	3
×			1	3

c.
TTh	Th	H	T	O
	2	2	0	2
×			3	4

2. Arrange vertically and multiply:

a.	3321 x 32	b.	2103 x 21	c.	2142 x 21	d.	1221 x 42
e.	3827 x 27	f.	2837 x 29	g.	3813 x 83	h.	8752 x 76

Let's Play

Objective: To develop the skill of multiplication.

Materials required: Number cards 0 to 9 (2 sets per pair).

Procedure:

1. Play the game in either pairs or in groups of four.
2. Give 6 cards to each player and stack the remaining cards.
3. When the game begins, 4 cards from the stacked cards are flipped face up to form a 4-digit number.
4. Each player draws 2 cards from the stack of 6 cards to make a 2-digit number.
5. Now, the players will multiply the 4-digit number formed earlier with the 2-digit number formed by the cards in hand. After finding the product, the two cards will be placed aside.
6. The player who finishes finding the product will quickly shuffle the stack of cards and draw 4 cards again to form a new 4-digit number.
7. Once again, two cards will be picked from the remaining cards in hand to form a 2-digit number.
8. Now the player will multiply the 4-digit number with the 2-digit number. After finding the product, the two cards will be placed aside.
9. The player who finishes using the 6 cards and finds the product correctly first will be the winner.

PLAYER 1

5 6

STACKED CARDS

1 2 8 3

4 7

PLAYER 2

1.5 Multiplication of a 3-digit number by a 3-digit number

Multiplication of a 3-digit number by a 3-digit number without regrouping

> Multiply 3-digit number by 3-digit number without regrouping
> Multiply 3-digit number by 3-digit number with regrouping

Example: Multiply 342 by 112.

Step 1

Multiply by ones.
Multiply 342 by 2.

Th	H	T	O
	3	4	2
×	1	1	2
	6	8	4

342 × 2

Step 2

Multiply by tens.
Multiply 342 by 10.

Th	H	T	O
	3	4	2
×	1	1	2
	6	8	4
3	4	2	0

342 × 2
342 × 10

Step 3

Multiply by hundreds.
Multiply 342 by 100.

Th	H	T	O
	3	4	2
×	1	1	2
	6	8	4
3	4	2	0
3 4	2	0	0

342 × 2
342 × 10
342 × 100

Step 4

Add the products.

Th	H	T	O
	3	4	2
×	1	1	2
	6	8	4
3	4	2	0
+ 3 4	2	0	0
3 8	3	0	4

342 × 2
342 × 10
342 × 100
Product

Therefore, 324 × 112 = 38304

Multiplication of a 3-digit number by a 3-digit number with regrouping

Example: Multiply 228 by 164.

Step 1

Multiply by ones.
Multiply 228 by 4.

H	T	O
2	2	8
× 1	6	4
9	1	2

228 × 4

Step 2

Multiply by tens.
Multiply 228 by 60.

TTh	Th	H	T	O
		2	2	8
×		1	6	4
		9	1	2
	1	3	6	8	0

228 × 4
228 × 60

Step 3

Multiply by hundreds.
Multiply 228 by 100.

H	T	O
2	2	8
× 1	6	4
9	1	2
1 3 6	8	0
2 2 8 0	0

228 × 4
228 × 60
228 × 100

Step 4

Add the products.

H	T	O
2	2	8
× 1	6	4
9	1	2
1 3 6 8	0
+ 2 2 8 0 0
3 7 3 9 2

228 × 4
228 × 60
228 × 100
Product

Therefore, 228 × 164 = 37392

Multiplication of numbers having zero in between

Example: 376 × 206

Step 1

Multiply by ones.
Multiply 376 by 6.

H	T	O
3	7	6

× 2 0 6

2	2	5	6

376 × 6

Step 2

Multiply by tens.
Multiply 376 by 0.

H	T	O
3	7	6

× 2 0 6

2 2 5 6
0 0 0 0

376 × 6
376 × 0

Step 3

Multiply by hundreds.
Multiply 376 by 200.

H	T	O
3	7	6

× 2 0 6

2 2 5 6
0 0 0 0
7 5 2 0 0

376 × 6
376 × 0
376 × 200

Step 4

Add the products.

H	T	O
3	7	6

× 2 0 6

2 2 5 6
0 0 0 0
+ 7 5 2 0 0

7 7 4 5 6

376 × 6
376 × 0
376 × 200
Product

Answer: 376 × 206 = 77456

CLASSWORK 5

✓ Check

Multiply 213 by 121

	TTh	Th	H	T	O
			2	1	3
×			1	2	1
			2	1	3
		4	2	6	0
+	2	1	3	0	0
	2	5	7	7	3

Multiply 628 by 472

	L	TTh	Th	H	T	O
				6	2	8
×				4	7	2
			1	2	5	6
		4	3	9	6	0
+	2	5	1	2	0	0
	2	9	6	4	1	6

Multiply 398 by 209

	L	TTh	Th	H	T	O
				3	9	8
×				3	0	9
			3	5	8	2
				0	0	0
+	1	1	9	4	0	0
	1	2	2	9	8	2

1. Multiply:

a.

Th	H	T	O
	3	1	2
×	2	2	3

b.

Th	H	T	O
	2	1	4
×	1	2	2

c.

Th	H	T	O
	3	7	2
×	1	3	2

d.

Th	H	T	O
	4	5	3
×	2	6	6

e.

Th	H	T	O
	3	5	6
×	2	0	7

f.

Th	H	T	O
	3	5	8
×	4	0	8

2. Arrange vertically and multiply:

a.	203 × 121	b.	121 × 443	c.	493 × 329	d.	726 × 368
e.	283 × 158	f.	376 × 204	g.	783 × 609	h.	682 × 408

HOMEWORK 5

1. Multiply:

a.

Th	H	T	O
	4	2	1
×	2	2	1

b.

Th	H	T	O
	2	2	3
×	3	2	3

c.

Th	H	T	O
	3	7	4
×	1	8	4

d.

Th	H	T	O
	4	3	8
×	2	5	8

e.

Th	H	T	O
	6	8	4
×	4	0	7

f.

Th	H	T	O
	5	8	3
×	2	0	6

2. Arrange vertically and multiply:

a.	142 × 112	b.	231 × 132	c.	844 × 226	d.	384 × 243
e.	824 × 527	f.	837 × 202	g.	313 × 105	h.	451 × 306

Multiplication of a 5-digit number by a 1-digit number without regrouping

Example: Multiply 22312 by 3.

Step 1

Multiply 2 by 3.
2 x 3 = 6

TTh	Th	H	T	O
2	2	3	1	2
			x	3
				6

Step 2

Multiply 1 by 3.
1 x 3 = 3

TTh	Th	H	T	O
2	2	3	1	2
			x	3
			3	6

Step 3

Multiply 3 by 3.
3 x 3 = 9

TTh	Th	H	T	O
2	2	3	1	2
			x	3
		9	3	6

Step 4

Multiply 2 by 3.
2 x 3 = 6

TTh	Th	H	T	O
2	2	3	1	2
			x	3
	6	9	3	6

Step 5

Multiply 2 by 3.
2 x 3 = 6

TTh	Th	H	T	O
2	2	3	1	2
			x	3
6	6	9	3	6

Therefore, 22312 x 3 = 66936

Multiplication of a 5-digit number by a 1-digit number with regrouping

Example: Multiply 21365 by 3.

Multiply 5 x 3.

$5 \times 3 = 15$

Write 5 in the ones place.

Carry 1 to the tens place.

TTh	Th	H	T	O
			①	
2	1	3	6	5
			×	3
				5

Step 2

Multiply 6 by 3.

$6 \times 3 = 18$

18 + 1 carry over = 19

Write 9 in tens place.

Carry 1 to hundreds place.

TTh	Th	H	T	O
		①	①	
2	1	3	6	5
			×	3
			9	5

Step 3

Multiply 3 by 3.

$3 \times 3 = 9$

9 + 1 = 10

Write 0 in the hundreds place.

Carry 1 to the thousands place.

TTh	Th	H	T	O
	①	①	①	
2	1	3	6	5
			×	3
		0	9	5

Step 4

Multiply 1 by 3.

$1 \times 3 = 3$

3 + 1 = 4

Write 4 in the thousands place.

TTh	Th	H	T	O
	①	①	①	
2	1	3	6	5
			×	3
	4	0	9	5

Step 5

Multiply 2 by 3.

$2 \times 3 = 6$

Write 6 in ten thousands place.

TTh	Th	H	T	O
	①	①	①	
2	1	3	6	5
			×	3
6	4	0	9	5

Answer: $21365 \times 3 = 64095$

CLASSWORK 6

✓ Check

TTh	Th	H	T	O
1	2	2	3	4
			×	2
2	4	4	6	8

L	TTh	Th	H	T	O
	4	6	3	6	1
				×	6
2	7	8	1	6	6

1. Multiply:

a.
TTh	Th	H	T	O
2	0	1	3	3
×				3

b.
TTh	Th	H	T	O
1	2	3	1	4
×				2

c.
TTh	Th	H	T	O
3	2	5	6	1
×				6

d.
TTh	Th	H	T	O
3	4	6	7	8
×				4

e.
TTh	Th	H	T	O
3	3	5	1	1
×				7

f.
TTh	Th	H	T	O
6	1	4	7	2
×				9

2. Arrange vertically and multiply:

a.	14242 × 2	b.	13431 × 2	c.	10302 × 3	d.	28142 × 6
e.	73642 × 8	f.	18337 × 4	g.	22817 × 9	h.	18372 × 3

HOMEWORK 6

1. Multiply:

a.
TTh	Th	H	T	O
1	2	0	2	3
×				3

b.
TTh	Th	H	T	O
3	4	4	1	2
×				2

c.
TTh	Th	H	T	O
1	2	2	1	1
×				4

d.
TTh	Th	H	T	O
2	3	5	7	2
×				6

e.
TTh	Th	H	T	O
4	8	4	1	9
×				8

f.
TTh	Th	H	T	O
5	6	3	9	2
×				9

2. Arrange vertically and multiply:

a.	23323 × 3	b.	23103 × 2	c.	33142 × 2	d.	24261 × 4
e.	38275 × 7	f.	28327 × 9	g.	56345 × 3	h.	37473 × 8

1.7 Word Problems

Solve word problems on multiplication.

While distributing rice, each villager was given 855 grams of rice. How many grams of rice were required to be distributed among 425 villagers?

Problem Solving Strategy

1. Given

Quantity of rice given to each villager = 855 grams

Number of villagers = 425

2. To find

Total quantity of rice required to be distributed among 425 villagers.

3. How?

855		855

425 villagers

↑ Quantity of rice given to each villager

4. Solve

L	T Th	Th	H	T	O
			8	5	5
	x		4	2	5
		4	2	7	5
	1	7	1	0	0
+ 3	4	2	0	0	0
3	6	3	3	7	5

Therefore, 363375 grams of rice are required to be distributed to 425 villagers.

Let's see another example:

There are 2585 students in a school and each student should get 8 notebooks. How many notebooks are required to be distributed among 2585 students?

Problem Solving Strategy

1. Given

Total number of students in the school = 2585

Number of notebooks to be given to each student = 8

2. To find

Total numbers of notebooks required.

3. How?

8		8

2585 students

Number of books each student gets.

4. Solve

2585×8

TTh	Th	H	T	O
	2	5	8	5
	×			8
2	0	6	8	0

Therefore, 20680 notebooks are required.

CLASSWORK 8

1. On World Environment Day, an NGO planted tree saplings.

a. They planted 1276 saplings each day in a village for 3 days. How many saplings were planted at the village?

b. They planted 1210 saplings each day for 2 days in a city. How many saplings were planted in the city?

c. In a particular village, saplings were planted in 9 rows. If each row contains 1928 saplings, how many saplings are there in all?

d. 1500 students each from two schools participated in planting the saplings. What was the total number of students that participated?

Solve the following:

a. A balloon factory packs 325 balloons in a packet. If 123 such packets are made in a day, how many balloons are packed everyday?

b. If the distance from Delhi to Chennai is 2679 km, what distance does the plane cover in a round trip?

c. In a library, 2565 books are placed on a rack. If there are 72 such racks, how many books does the library have?

d. The cost of a first-class plane ticket from India to Dubai is ₹ 54664. If 9 friends are travelling from India to Dubai, how much money do they have to pay?

e. A pencil factory produces 5467 pencils everyday. If the factory has 25 working days in a month, how many pencils are produced in a month?

HOMEWORK 8

1. **Solve the following:**

a. There are 60 minutes in an hour. How many minutes are there in 1251 hours?

b. Gaurang's wife drove his new car for 34654 km in a year. How many kilometres did she drive in 3 years?

c. In a farm, there are 169 rows of plants. If there are 283 plants in each rows, calculate the total number of plants in that farm.

d. The cost of a pair of shoes is ₹ 3775. What will be the cost of 83 pairs of such shoes?

e. A factory makes 987 toy cars a day. How many toy cars can be made in a year? [Hint: 1 year = 365 days]

f. Raju has 48 notes of ₹ 2000. How much money does he have in total?

The school organised a visit to a beach. There were 125 students. The students were asked to collect all the garbage on the beach and put it in the garbage bag.

a. The school gave one bin bag to each child. Each child was able to collect 325 grams of garbage in the bin bag. How many grams of garbage was collected by all the students of the school?

They segregated the garbage into plastic, organic, glass and paper.

b. The organic and glass waste products were equal in weight. If each of them weighed 12837 g, find the total weight.

PAPER   **PLASTIC**   **GLASS**   **ORGANIC**

1. Multiply and find the products.

a. 1213 × 3   b. 1133 × 4   c. 2243 × 6   d. 3576 × 7
e. 8621 × 8   f. 9873 × 9   g. 9221 × 5   h. 4132 × 40
i. 631 × 173   j. 547 × 287   k. 449 × 214   l. 359 × 143
m. 135 × 104   n. 21233 × 3   o. 32448 × 5   p. 44657 × 7

2. Solve the following:

a. If in a day there are 1440 minutes, then how many minutes are there in the month of February?
[Hint: the month of February has 28 days]

b. A yoga teacher teaches yoga for 185 minutes each day. For how many minutes does the teacher teach yoga in 103 days?

c. A group of 7 people are going to America. Each person has to pay ₹ 79987 as air fare. What will be the air fare of the entire group?

d. A baker bakes 5348 loaves of bread in a year. How many loaves of bread will he bake in 2 years?

e. A candle factory produces 2341 candles in a day. How many candles will this factory produce in 25 days?

f. A typist can type 18345 words in a day. How many words will she type in 4 days?

g. A carton can hold 25 dozens of pears. How many pears are there in 934 cartons? [Hint: 1 dozen of pear = 12 pears in total.

Choose the correct option:

1. What is the correct number?

   [ ] × 18 = 3600

   a. 200   b. 1000   c. 70   d. 400

2. Raja bought two dozen eggs from the shop. If each egg cost him ₹ 12, what will be the total amount for two dozen eggs?

   a. 282   b. 228   c. 828   d. 288

3. 21 × 500 =

   a. 15000   b. 10500   c. 10005   d. 10050

4. 111 × 101 =

   a. 11211   b. 12111   c. 12211   d. 12121

5. Multiplicand is 1234 and multiplier is 12. Find the product.

   a. 14880   b. 14088   c. 14888   d. 14808

6. 18 × 1000 =

   a. 180   b. 1800   c. 180000   d. 18000

7. 4999 is first multiplied by 1 and then by 0 and 2 is added to the product. What is the correct answer?

   a. 0   b. 1   c. 2   d. 4999

8. Fill in the box: 100 × 4 [ ] 8 × 50.

   a. <   b. >   c. =   d. None of these

9. If 44 × 87 = 3828, then which of following is true?
   a. 44 × 3828 = 87   b.   87 × 44 = 3828
   c. 87 × 3828 = 44   d.   None of these

10. In the number 12345, the product of the face value and place value of 3 is:

    a. 9   b. 90   c. 300   d. 900