		TL	L	TTh	Th	H	T	O	
					5	2	9	7	← Multiplicand
	x				1	0	2	5	← Multiplier
Step 1: 5297 × 5				2	6	4	8	5	
Step 2: 5297 × 20			1	0	5	9	4	0	
Step 3: 5297 × 0			0	0	0	0	0	0	
Step 4: 5297 × 1000	+	5	2	9	7	0	0	0	
		5	4	2	9	4	2	5	← Product

Therefore, 5297 × 1025 = 54,29,425

Properties of Multiplication

Property 1: The product of any number and 1 is the number itself.

Example: 8521 × 1 = 8521; 24,683 × 1 = 24,683

Property 2: The product of any number with 0 is 0.

Example: 38,567 × 0 = 0 ; 4,29,732 × 0 = 0

Property 3: If *P* and *Q* are two numbers, then *P* × *Q* = *Q* × *P*.

Example: 24,613 × 124 = 30,52,012

Also, 124 × 24,613 = 30,52,012

So, 24,613 × 124 = 124 × 24,613

Property 4: The product of two even numbers is an even number.

Example: 214 × 4 = 856

Property 5: The product of any two odd numbers is an odd number.

Example: 117 × 7 = 819

Word Problem

Example: A basket of apples costs ₹ 1346. What is the cost of 96 such baskets?

		L	TTh	Th	H	T	O
Cost of 1 basket of apples				1	3	4	6
Cost of 96 baskets of apples	x					9	6
		1	2	9	2	1	6

Hence, 96 baskets of apples will cost ₹ 1,29,216.

Exercise 2.2

1. Multiply the following:

   a. 1028 × 321 b. 4721 × 521 c. 1231 × 482

   d. 1845 × 240 e. 4837 × 103 f. 3421 × 120

   g. 5005 × 1210 h. 2527 × 3985 i. 7108 × 8015

2. A silk saree costs ₹ 2428. What will be the cost of 134 such sarees?

3. There are 1520 children in a school. The school collects ₹ 125 from each student for charity. Find the total amount collected.

4. Find the product of the largest 3-digit number and the smallest 4-digit number.

5. A factory produces 363 dolls in a day. How many dolls will be produced in 1268 days?

6. A factory manufactures 456 soaps in a day. How many soaps will the company manufacture in 15 weeks?

Short Cut Multiplication

Consider 48 × 102.

102 is 100 + 2.

48 × 102 → 48 × 100 = 4800

48 × 2 = + 96

4896

Try 121 × 39.

39 is 40 − 1.

121 × 39 → 121 × 40 = 4840

121 × 1 = −121

4719

Exercise 2.2 (Page 25)

1. a. 1028×321

		Th	H	T	O
		1	0	2	8
	×		3	2	1
Step 1: 1028×1		1	0	2	8
Step 2: 1028×20	2	0	5	6	0
Step 3: 1028×300 +	3	0	8	4	0	0
	3	2	9	9	8	8

Therefore, $1028 \times 321 = 3,29,988$

b. 4721×521

		C	L	TTh	Th	H	T	O
					4	7	2	1
	×					5	2	1
Step 1: 4721×1					4	7	2	1
Step 2: 4721×20				9	4	4	2	0
Step 3: 4721×500	+	2	3	6	0	5	0	0
		2	4	5	9	6	4	1

Therefore, $4721 \times 521 = 24,59,641$

c. 1231×482

		L	TTh	Th	H	T	O
				1	2	3	1
	×				4	8	2
Step 1: 1231×2				2	4	6	2
Step 2: 1231×80			9	8	4	8	0
Step 3: 1231×400	+	4	9	2	4	0	0
		5	9	3	3	4	2

Therefore, $1231 \times 482 = 5,93,342$

d. 1845×240

		L	TTh	Th	H	T	O
				1	8	4	5
	×				2	4	0
Step 1: 1845×0				0	0	0	0
Step 2: 1845×40			7	3	8	0	0
Step 3: 1845×200	+	3	6	9	0	0	0
		4	4	2	8	0	0

Therefore, $1845 \times 240 = 4,42,800$

e. 4837×103

		L	TTh	Th	H	T	O
				4	8	3	7
	×				1	0	3
Step 1: 4837×3			1	4	5	1	1
Step 2: 4837×0			0	0	0	0	0
Step 3: 4837×100	+	4	8	3	7	0	0
		4	9	8	2	1	1

Therefore, $4837 \times 103 = 4,98,211$

f. 3421×120

		L	TTh	Th	H	T	O
				3	4	2	1
	×				1	2	0
Step 1: 3421×0				0	0	0	0
Step 2: 3421×20			6	8	4	2	0
Step 3: 3421×100	+	3	4	2	1	0	0
		4	1	0	5	2	0

Therefore, $3421 \times 120 = 4,10,520$

g. 5005×1210

		TL	L	TTh	Th	H	T	O
					5	0	0	5
	×				1	2	1	0
Step 1: 5005×0					0	0	0	0
Step 2: 5005×10				5	0	0	5	0
Step 3: 5005×200		1	0	0	1	0	0	0
Step 4: 5005×1000	+	5	0	0	5	0	0	0
		6	0	5	6	0	5	0

Therefore, $5005 \times 1210 = 60,56,050$

h. 2527×3985

		C	TL	L	TTh	Th	H	T	O
						2	5	2	7
	×					3	9	8	5
Step 1: 2527×5						1	2	6	3	5
Step 2: 2527×80				2	0	2	1	6	0
Step 3: 2527×900			2	2	7	4	3	0	0
Step 4: 2527×3000	+		7	5	8	1	0	0	0
		1	0	0	7	0	0	9	5

Therefore, $2527 \times 3985 = 1,00,70,095$

i. 7108×8015

		C	TL	L	TTh	Th	H	T	O
						7	1	0	8
	×					8	0	1	5
Step 1: 7108×5						3	5	5	4	0
Step 2: 7108×10					7	1	0	8	0
Step 3: 7108×0				0	0	0	0	0	0
Step 4: 7108×8000	+	5	6	8	6	4	0	0	0
		5	6	9	7	0	6	2	0

Therefore, $7108 \times 8015 = 5,69,70,620$

2.

		L	TTh	Th	H	T	O
Cost of 1 silk saree				2	4	2	8
Cost of 134 sarees		×			1	3	4
Step 1: 2428 × 4				9	7	1	2
Step 2: 2428 × 30			7	2	8	4	0
Step 3: 2428 × 100	+	2	4	2	8	0	0
		3	2	5	3	5	2

Hence, 134 sarees will cost ₹3,25,352.

3.

		L	TTh	Th	H	T	O
Total children in a school				1	5	2	0
Amount collected from each child		×			1	2	5
Step 1: 1520 × 5				7	6	0	0
Step 2: 1520 × 20			3	0	4	0	0
Step 3: 1520 × 100	+	1	5	2	0	0	0
		1	9	0	0	0	0

Hence, total amount collected is ₹1,90,000.

4.

Largest 3-digit number = 999

Smallest 4-digit number = 1000

So, 999 × 1000 = 999000

Hence, the product of largest 3-digit number and smallest 4-digit number is 9,99,000.

5.

		L	TTh	Th	H	T	O
Total number of days				1	2	6	8
Number of dolls factory produces per day		×			3	6	3
Step 1: 1268 × 3				3	8	0	4
Step 2: 1268 × 60			7	6	0	8	0
Step 3: 1268 × 300	+	3	8	0	4	0	0
		4	6	0	2	8	4

Hence, 4,60,284 dolls will be produced in 1268 days.

6.

		TTh	Th	H	T	O
Number of soaps manufactured in a day				4	5	6
Number of soaps manufactured in 15 weeks(15×7)	×			1	0	5
Step 1: 456×5				2	2	8	0
Step 2: 456×0				0	0	0	0
Step 3: 456×100	+	4	5	6	0	0
		4	7	8	8	0

Hence, the company manufactures 47,880 soaps in 15 weeks.