

Mathematics

STANDARD 4

NUMBER:

Multiplication and Division

Students will:

Develop and apply procedures to multiply and divide whole numbers to solve problems.

Solve real-life problems involving multiplication and division.

TEACHING POINTS

Algorithm for multiplying 2-digit, 3-digit and 4-digit numbers by 2-digit numbers.

Division (up to 4-digit by 2-digit divisors).

EXERCISE 1

Fill in the numbers in the grid below. Each square is the product of the corresponding number at the top of the grid and the number at the side of the grid.

	1	2	3	4	5	6	7	8	9	10	11	12
1	1											
2		4										
3			9									
4				16								
5					25							
6						36						
7							49					
8								64				
9									81			
10										100		
11											121	
12												144

EXERCISE 2

Put the missing number in the box that will make the number sentence true.

1.

$$\text{Given } 45 \times 16 = 720$$

$$45 \times \boxed{} = 1\,440$$

2.

$$\text{Given } 75 \times 9 = 675$$

$$75 \times \boxed{} = 1\,350$$

3.

$$\text{Given } 39 \times 25 = 975$$

$$\boxed{} \times 75 = 975$$

4.

$$\text{Given } 24 \times 15 = 360$$

$$\boxed{} \times 5 = 360$$

5.

$$\text{Given } 45 \times 24 = 1\,080$$

$$15 \times 72 = \boxed{}$$

6.

$$\text{Given } 16 \times 48 = 768$$

$$16 \times 24 = \boxed{}$$

7.

$$\text{Given } 36 \times 120 = 4\,320$$

$$108 \times \boxed{} = 4\,320$$

8.

$$\text{Given } 32 \times 125 = 4\,000$$

$$\boxed{} \times 25 = 4\,000$$

EXERCISE 3

Calculate the following products.

1.

		1	3	7
	x		2	4
		<hr/>		

2.

		2	0	6
	x		3	7
		<hr/>		

3.

		4	1	5
	x		6	3
		<hr/>		

4.

		3	6	1
	x		5	3
		<hr/>		

5.

		2	7	6
	x		8	4
		<hr/>		

6.

		4	7	8
	x		6	2
		<hr/>		

EXERCISE 4. Worded problems

1. A school had 24 classrooms and each classroom had 32 desks.
What is the total number of desks at the school?
2. How many soft drinks are there in 52 cases if each case contained 24 drinks?
3. Myra made 25 flower arrangements. Each arrangement had 42 flowers. How many flowers did she use altogether?
4. Jabari used 16 beads to make a flower for a necklace. The necklace had 21 flowers. How many beads did he use for the necklace?
5. Posts were placed along a straight road at 35 m intervals. If 62 posts were used, how long was the road? (Assume that the first post was at the start of the road and the last post was at the end of the road).
6. A pattern was made with 15 squares and 15 rectangles as follows. The rectangle had a length of 30cm and a width of 18 cm. How long was the pattern?



7. Allison used 525 g of flour to make a cake. How much flour would she need to make 12 such cakes?
8. Radha saved \$4.25 every week for 17 weeks. How much money did she save altogether?

EXERCISE 5 No Remainder

1.

1	2	1	4	6	4				

2.

1	4	1	0	9	2				

3.

3	6	1	2	4	2	0			

4.

2	5	1	1	5	0				

5.

4	5	1	4	0	4	0			

6.

5	1	2	3	1	0	3			

EXERCISE 6 With Remainder

1.

1	5	8	8	2	3				

2.

2	4	5	6	7	8				

3.

3	2	2	5	2	7	9			

4.

5	2	1	2	7	6	8			

5.

2	3	1	9	7	0	0			

6.

4	5	3	2	0	0	0			

EXERCISE 7 Worded Problems

1. How many cases each of 24 bottles can be made from 3 528 bottles?
2. How many maxi-taxis are needed to transport 1 500 children if each maxi-taxi holds 12 children?
3. A school has 434 desks to put in 14 classrooms. If the number of desks in each classroom is the same, how many desks were put in a classroom?
4. Debbie shared a sum \$5 680 among 45 persons. She gave each person the same amount of money and she had \$10 remaining. How much money did each person get?
5. Machel distributed toys to 1052 children. What is the minimum number of boxes of toys he needs to buy if each child got 1 toy and each of the boxes had 15 toys?
6. Nadia needed 15 beads to make a flower. What is the maximum number of flowers she can make with 1 400 beads?
7. A hall had 16 rows of 25 chairs. How many more rows will be needed to seat 550 people?
8. Peter placed 22 stamps on each page of his album starting with a blank album. On what page will he put his 1 127th stamp?

ANSWERS

EXERCISE 1 ANSWERS

	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

EXERCISE 2 ANSWERS

1.

$$\begin{aligned} \text{Given } 45 \times 16 &= 720 \\ 45 \times \boxed{32} &= 1\,440 \end{aligned}$$

2.

$$\begin{aligned} \text{Given } 75 \times 9 &= 675 \\ 75 \times \boxed{18} &= 1\,350 \end{aligned}$$

3.

$$\begin{aligned} \text{Given } 39 \times 25 &= 975 \\ \boxed{13} \times 75 &= \mathbf{975} \end{aligned}$$

4.

$$\begin{aligned} \text{Given } 24 \times 15 &= 360 \\ \boxed{72} \times 5 &= 360 \end{aligned}$$

5.

$$\begin{aligned} \text{Given } 45 \times 24 &= 1\,080 \\ 15 \times 72 &= \boxed{1\,080} \end{aligned}$$

6.

$$\begin{aligned} \text{Given } 16 \times 48 &= 768 \\ 16 \times 24 &= \boxed{384} \end{aligned}$$

7.

$$\begin{aligned} \text{Given } 36 \times 120 &= 4\,320 \\ 108 \times \boxed{40} &= 4\,320 \end{aligned}$$

8.

$$\begin{aligned} \text{Given } 32 \times 125 &= 4\,000 \\ \boxed{160} \times 25 &= 4\,000 \end{aligned}$$

EXERCISE 3 ANSWERS

1.

		1	3	7
	x		2	4
		5	4	8
	2	7	4	0
	3	2	8	8

2.

		2	0	6
	x		3	7
	1	4	4	2
	6	1	8	0
	7	6	2	2

3.

		4	1	5
	x		6	3
	1	2	4	5
2	4	9	0	0
2	6	1	4	5

4.

		3	6	1
	x		5	3
	1	0	8	3
1	8	0	5	0
1	9	1	3	3

5.

		2	7	6
	x		8	4
	1	1	0	4
2	2	0	8	0
2	3	1	8	4

6.

		4	7	8
	x		6	2
		9	5	6
2	8	6	8	0
2	9	6	3	6

EXERCISE 4 ANSWERS

1. 768
2. 1 248
3. 1 050
4. 336
5. $2\ 135\text{m} = 2.135\text{km}$
6. $720\text{cm} = 7.2\text{m}$
7. $6\ 300\text{g} = 6.3\text{kg}$
8. \$72.25

EXERCISE 5 ANSWERS

1.

			1	2	2
1	2	1	4	6	4
		1	2	↓	↓
		2	6		
		2	4	↓	
			2	4	
			2	4	
			0	0	

2.

				7	8
1	4	1	0	9	2
			9	8	↓
			1	1	2
			1	1	2
				0	0

3.

				3	4	5
3	6	1	2	4	2	0
		1	0	8	↓	↓
			1	6	2	
			1	4	4	↓
				1	8	0
				1	8	0
				0	0	0

4.

				4	6
2	5	1	1	5	0
		1	0	0	↓
			1	5	0
			1	5	0
			0	0	0

5.

				3	1	2
4	5	1	4	0	4	0
		1	3	5	↓	↓
				5	4	
				4	5	↓
				9	0	
				9	0	
				0	0	

6.

				4	5	3
5	1	2	3	1	0	3
		2	0	4	↓	↓
			2	7	0	
			2	5	5	↓
				1	5	3
				1	5	3
				0	0	0

EXERCISE 6 ANSWERS

			5	8	8	R	3		
1	5	8	8	2	3				
		7	5						
		1	3	2					
		1	2	0					
		1	2	3					
		1	2	0					
					3				

2.

			2	3	6	R	14		
2	4	5	6	7	8				
		4	8						
		8	7						
		7	2						
		1	5	8					
		1	4	4					
			1	4					

3.

			7	8	9	R	31		
3	2	2	5	2	7	9			
		2	2	4					
		2	8	7					
		2	5	6					
		3	1	9					
		2	8	8					
			3	1					

4.

			2	4	5	R	28		
5	2	1	2	7	6	8			
		1	0	4					
		2	3	6					
		2	0	8					
		2	8	8					
		2	6	0					
			2	8					

5.

			8	5	6	R	12		
2	3	1	9	7	0	0			
		1	8	4					
		1	3	0					
		1	1	5					
		1	5	0					
		1	3	8					
			1	2					

6.

			7	1	1	R	5		
4	5	3	2	0	0	0			
		3	1	5					
		5	0						
		4	5						
		5	0						
		4	5						
			5						

EXERCISE 7 ANSWERS

1. 147 cases
2. 125 maxi-taxis
3. 31 desks
4. \$126
5. 71 boxes
6. 93 flowers
7. 6 more rows
8. 52nd page