

Master 10.20

Extra Practice 1

Lesson 1: Factors, Products, Quotients

1. Find the factors of each number.

a) 15

b) 19

c) 26

d) 39

e) 27

f) 63

g) 72

h) 100

2. Find 2 numbers in the 30s which have exactly 2 factors.

3. Is 2 a factor of 91? Explain how you know.

4. Write all the multiplication sentences that show the factors of 16.

5. Find 2 numbers in the 50s which have exactly 8 factors.

Lesson 2: Patterns in Multiplication

1. Multiply. Use mental math.

a) $2 \times 17 \times 5$

b) $31 \times 5 \times 2$

c) $2 \times 147 \times 5$

d) $2 \times 43 \times 50$

e) $3 \times 18 \times 10$

f) $4 \times 50 \times 5$

2. Multiply 10×35 . Use this multiplication fact to find the missing factors.

a) $\square \times 35 = 385$

b) $\square \times 35 = 315$

c) $420 = \square \times 35$

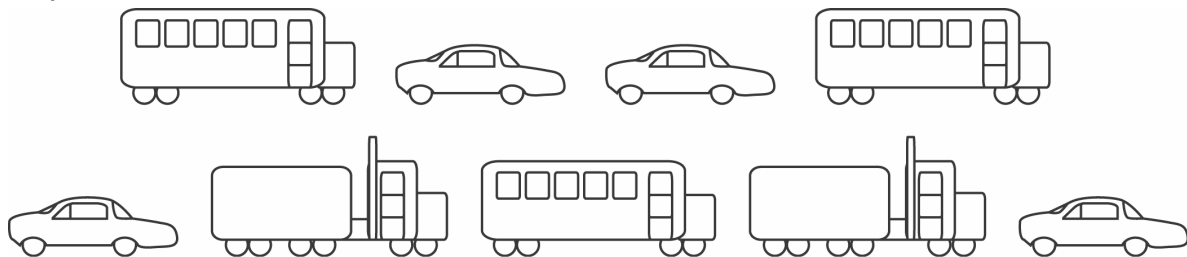
d) $280 = \square \times 35$

Lesson 3: Open Sentences

- The unknown number in each open sentence is a whole number. Tell whether each sentence is always true, sometimes true, or never true.
 - $3 \times \square$ is a 1-digit number.
 - $20 \div \square$ is greater than 20.
 - $325 + \square$ is greater than 300.
 - $\square \times 2$ is even.
- Copy each sentence. Replace each open frame with a whole number that makes the sentence true.
 - $17 - \square$ is even.
 - $25 \div \square$ has a remainder.
 - $\square \times \square$ is a multiple of 7.
 - $\square + \Delta$ is odd.
- Write an open sentence that is:
 - always true
 - sometimes true
 - never true

Lesson 4: Exploring Ratio Concepts

- Draw a picture to show each ratio.
 - 4 big circles to 2 small circles
 - 3 hearts to 9 diamonds
 - 5 stars to 1 moon
- Write as many different ratios as you can for the picture. Explain what each ratio means.



- Use the word MATHEMATICS to write each ratio:
 - consonants to vowels
 - vowels to consonants
 - consonants to letters
 - letters to vowels

Lesson 5: Coordinate Grids

- a) Label a grid on square grid paper.
Draw the smallest square you can.
Make sure that each vertex of the square is on a point on the grid.
Name the coordinate pairs.
- b) Draw another square that is exactly twice as big.
Name the coordinate pairs.
- c) Can you predict the coordinate pairs for a square 3 times as big as the square in part a?

Explain.

Lesson 6: Graphing Patterns

Wayne is paid \$7 an hour to mow lawns.
The table shows his earnings.

Hours	Amount Earned (\$)
2	14
4	28
6	42
8	56

- a) Write a pattern rule for the amount earned.
- b) Draw a line graph to display the data.
- c) Suppose Wayne works 7 h.
Use the graph to find how much he will earn.

Lesson 7: Areas and Perimeters

1. Use 1-cm grid paper.

a) Draw as many different rectangles as you can with area 18 cm^2 .

b) Draw as many rectangles as you can with perimeter 30 cm.

2. What happens to the area of a rectangle if you double its length and its width?
Give examples to support your answer.

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Extra Practice Answers

Extra Practice 1 – Master 10.20

Lesson 1

- 1, 3, 5, 15
 - 1, 19
 - 1, 2, 13, 26
 - 1, 3, 13, 39
 - 1, 3, 9, 27
 - 1, 3, 7, 9, 21, 63
 - 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72
 - 1, 2, 4, 5, 10, 20, 25, 50, 100
- 31 and 37
- 2 is not a factor of 91; 91 is not a multiple of 2.
- $1 \times 16 = 16$; $2 \times 8 = 16$; $4 \times 4 = 16$
- 54 and 56

Lesson 2




- 170
 - 310
 - 1470
 - 4300
 - 540
 - 1000
- 11
 - 9
 - 12
 - 8

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Lesson 3

- sometimes true
 - never true
 - always true
 - always true
- $17 - 5$ is even.
 - $25 \div 6$ has a remainder.
 - 7×7 is a multiple of 7.
 - $5 + 4$ is odd.
- $65 + \square$ is greater than 60.
 - $49 - \square$ is an even number.
 - $15 \div \square$ is 0.

Lesson 4

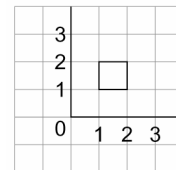
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- 4:2 – 4 cars to 2 trucks
 - 4:3 – 4 cars to 3 buses
 - 2:4 – 2 trucks to 4 cars
 - 2:3 – 2 trucks to 3 buses
 - 3:4 – 3 buses to 4 cars
 - 3:2 – 3 buses to 2 trucks
 - 4:9 – 4 cars to 9 vehicles
 - 2:9 – 2 trucks to 9 vehicles
 - 3:9 – 3 buses to 9 vehicles

- 7:4
 - 4:7
 - 7:11
 - 11:4

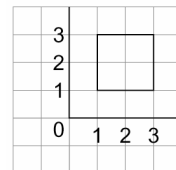
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Lesson 5

- The square below has coordinate pairs (2,1), (2,2), (1,2), (1,1).



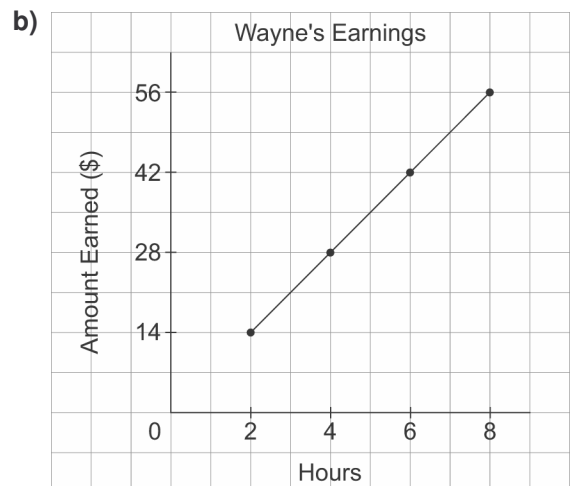
- The coordinate pairs for a square that is twice as big are: (3,1), (3,3), (1,3), (1,1)



- I would keep one vertex of the square at (1,1). Then, the other 3 vertices would have coordinate pairs (4,1), (4,4), (1,4).

Lesson 6

- Multiply the number of hours worked by \$7.

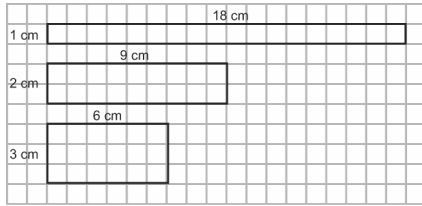


- \$49

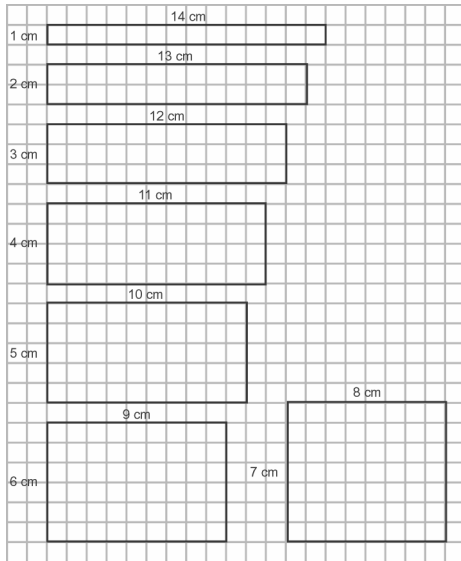
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Lesson 7

1. a)



b)



2. The area is 4 times greater. For example, a rectangle with a length of 3 cm and a width of 5 cm has an area of 15 cm^2 . If you double the length to 6 cm and the width to 10 cm, the area is 60 cm^2 , which is four times as great as the original area.