EUREKA MATH PUSD

Solutions

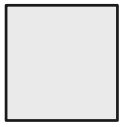
Exit Tickets

Solutions

GRADE 3
MODULE 4

Version 3

Name _____ Date _____

Each  is 1 square unit. Do both rectangles have the same area? Explain how you know.

1	2	3
4	5	6
7	8	9
10	11	12

3 x 4 = 12

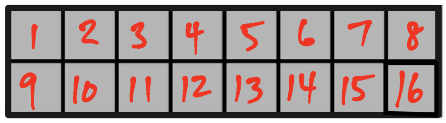
1	2	3	4	5	6
7	8	9	10	11	12

2 x 6 = 12

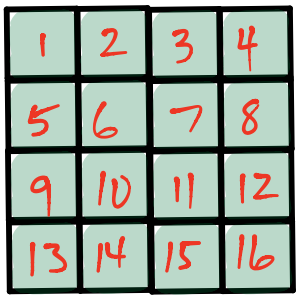
Both rectangles have the same area because both are made using 12 square units.

Name _____ Date _____

1. Each ▢ is a square unit. Find the area of the rectangle below. Then, draw a different rectangle with the same number of square units.

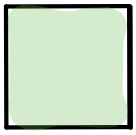


2 x 8 = 16



4 x 4 = 16

2. Zach creates a rectangle with an area of 6 square inches. Luke makes a rectangle with an area of 6 square centimeters. Do the two rectangles have the same area? Why or why not?



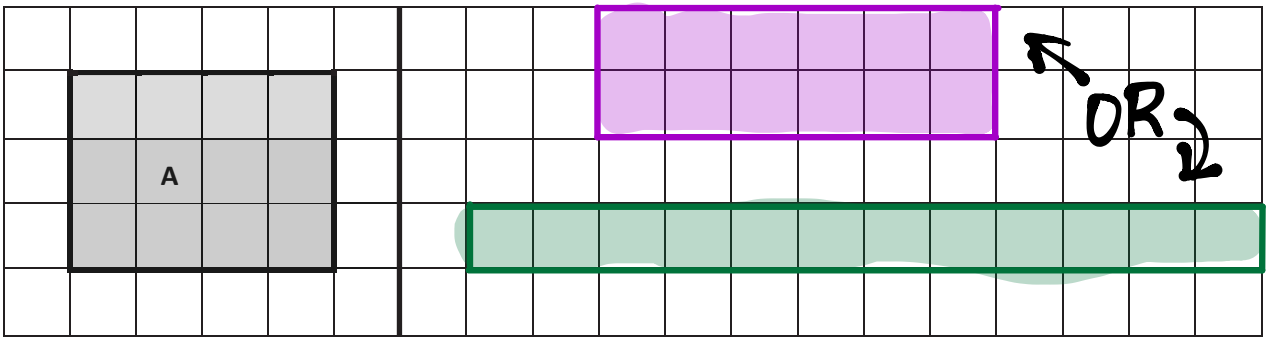
1 square inch

1 square centimeter

Since one inch is longer than one centimeter, a square inch is larger than a square centimeter. This means Zach's rectangle is larger than Lukes even though they both used 6 square units.

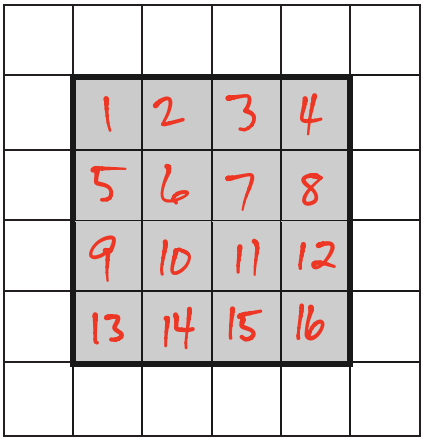
Name _____ Date _____

1. Each ☐ is 1 square unit. Write the area of Rectangle A. Then, draw a different rectangle with the same area in the space provided.



Area = 12 square units

2. Each ☐ is 1 square unit. Does this rectangle have the same area as Rectangle A? Explain.

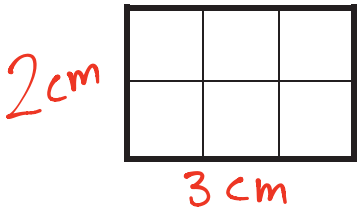


This rectangle has an area of 16 square units. Rectangle A is only 12 square units.

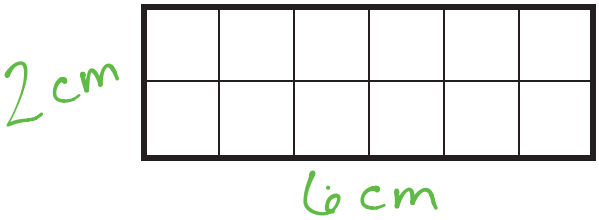
Name _____ Date _____

Label the side lengths of each rectangle. Then, match the rectangle to its total area.

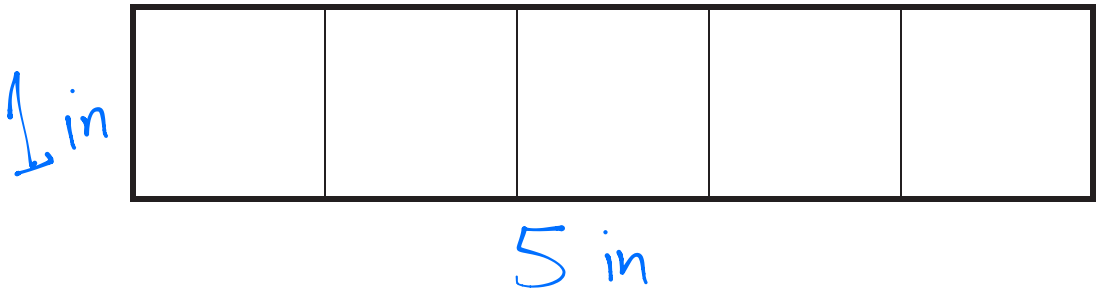
a.



b.



c.



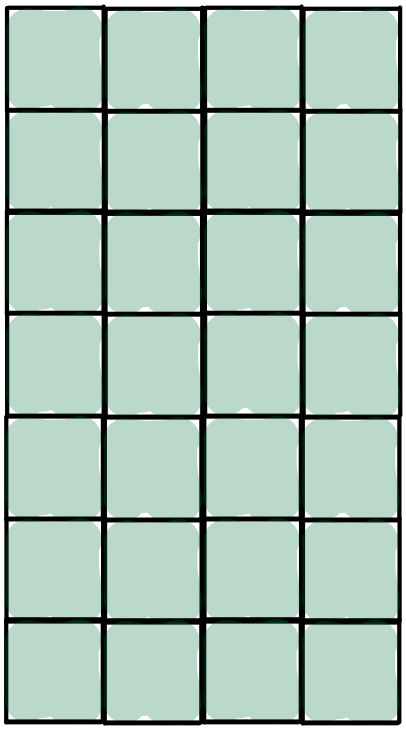
12 square centimeters

5 square inches

6 square centimeters

Name _____ Date _____

Darren has a total of 28 square centimeter tiles. He arranges them into 7 equal rows. Draw Darren's rectangle. Label the side lengths, and write a multiplication sentence to find the total area.

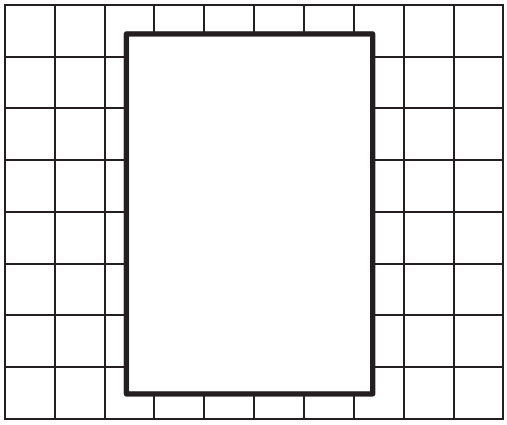


$7 \times 4 = 28$

Area = 28 square centimeters

Name _____ Date _____

The tiled floor in Cayden's dining room has a rug on it as shown below. How many square tiles are on the floor, including the tiles under the rug?



8 tiles

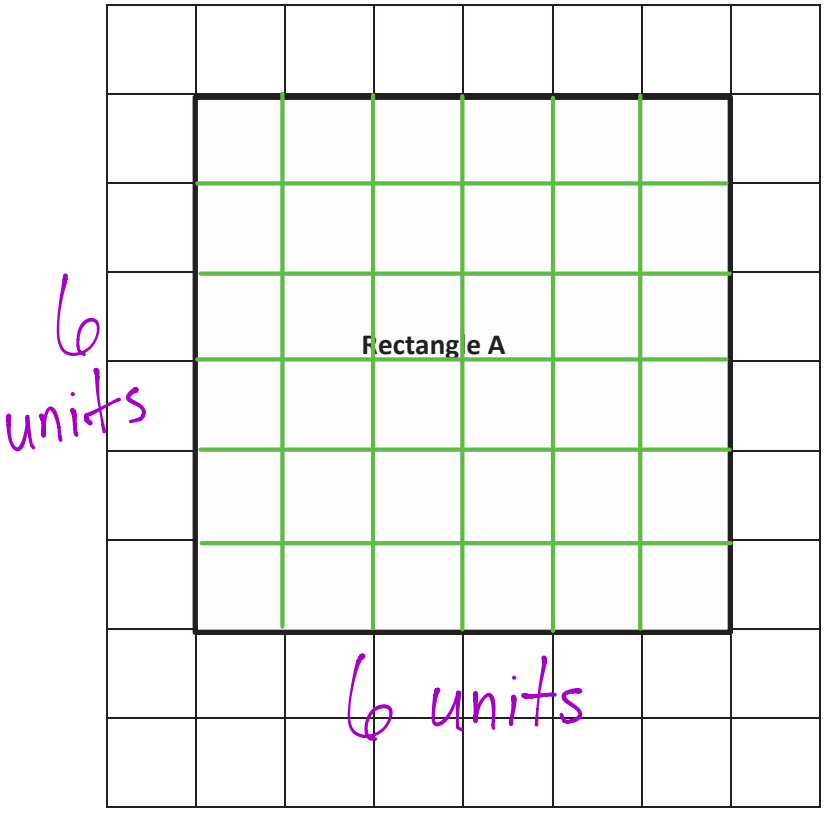
10 tiles

8 x 10 = 80

There are 80 tiles on the dining room floor.

Name _____ Date _____

1. Label the side lengths of Rectangle A on the grid below. Use a straight edge to draw a grid of equal size squares within Rectangle A. Find the total area of Rectangle A.



Area: 36 square units

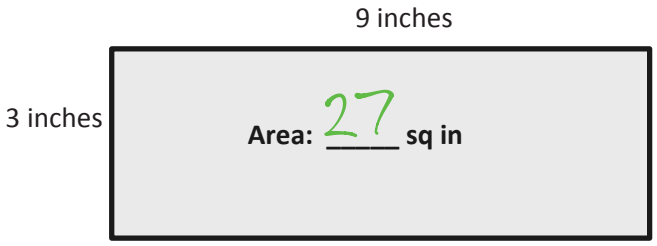
6 x 6 = 36

2. Mark makes a rectangle with 36 square centimeter tiles. Gia makes a rectangle with 36 square inch tiles. Whose rectangle has a bigger area? Explain your answer.

Gia's rectangle has a bigger area because inches are longer than centimeters, so square inch tiles are larger than square centimeter tiles.

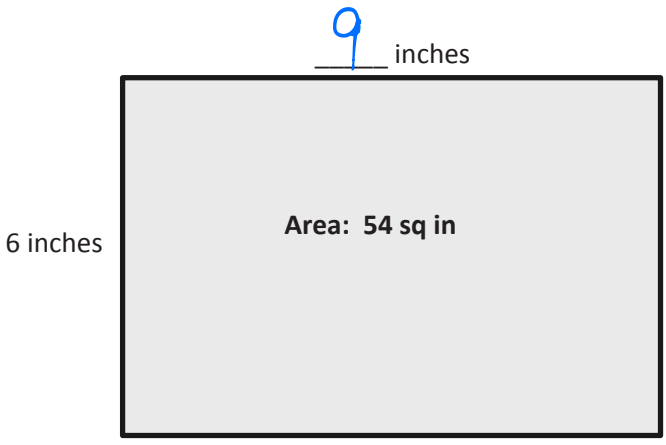
Name _____ Date _____

1. Write a multiplication equation to find the area of the rectangle below.



3 × 9 = 27

2. Write a multiplication equation and a division equation to find the unknown side length for the rectangle below.



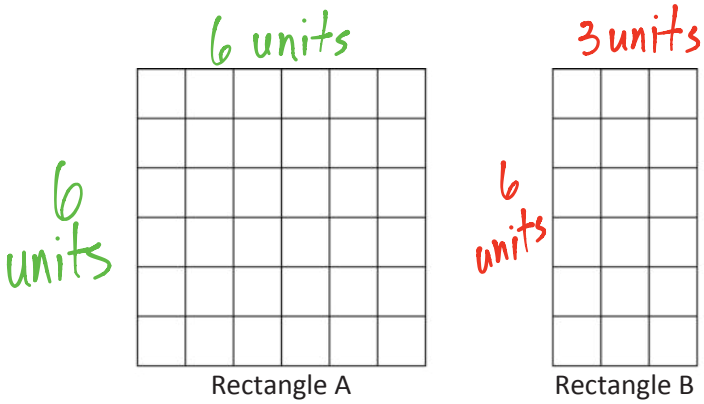
6 × 9 = 54

54 ÷ 6 = 9

54 ÷ 9 = 6 ← also correct!

Name _____ Date _____

Lamar uses square tiles to make the 2 rectangles shown below.



1. Label the side lengths of the 2 rectangles.

2. Write equations to find the areas of the rectangles.

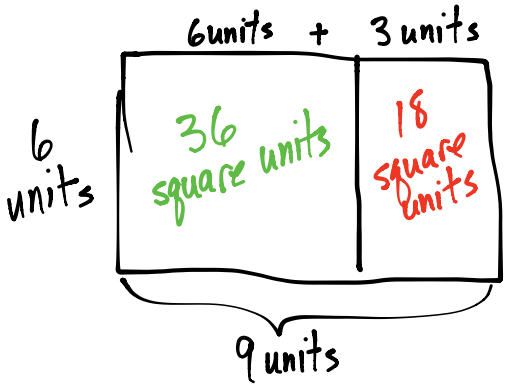
Area of Rectangle A: 36 square units

$6 \times 6 = 36$

Area of Rectangle B: 18 square units

$6 \times 3 = 18$

3. Lamar pushes Rectangle A next to Rectangle B to make a bigger rectangle. What is the area of the bigger rectangle? How do you know?



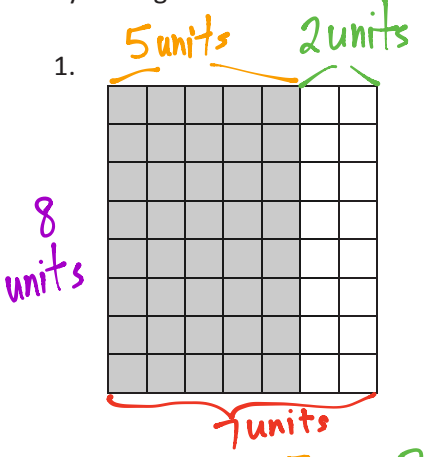
$6 \times 9 = 54$

The area of the bigger rectangle is 54 square units because 6×9 is 54.

Name _____ Date _____

Label the side lengths of the shaded and unshaded rectangles. Then, find the total area of the large rectangle by adding the areas of the 2 smaller rectangles.

1.



$8 \times 7 = 8 \times (\underline{5} + \underline{2})$

$= (8 \times \underline{5}) + (8 \times \underline{2})$

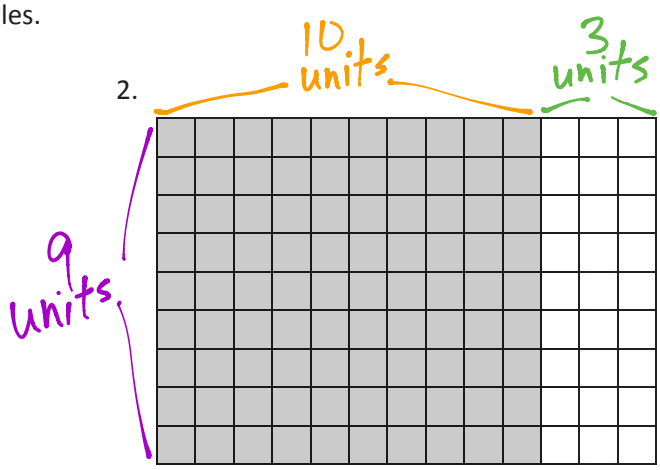
$= \underline{40} + \underline{16}$

$= \underline{56}$

Area: 56 square units

$8 \times 7 = 56$

2.



$9 \times 13 = 9 \times (\underline{10} + \underline{3})$

$= (\underline{9} \times \underline{10}) + (\underline{9} \times \underline{3})$

$= \underline{90} + \underline{27}$

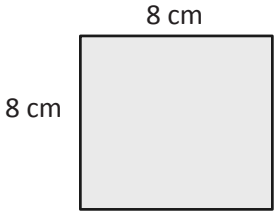
$= \underline{117}$

Area: 117 square units

$9 \times 13 = 117$

Name _____ Date _____

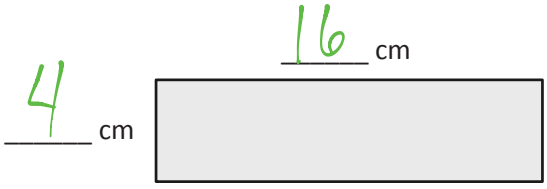
1. Find the area of the rectangle.



$8 \times 8 = (8 \times 5) + (8 \times 3)$
$= 40 + 24$
$= 64$

$8 \times 8 = 64$

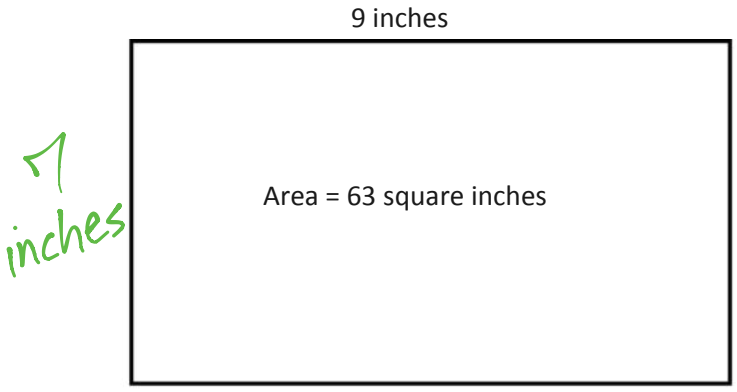
2. The rectangle below has the same area as the rectangle in Problem 1. Move the parentheses to find the unknown side lengths. Then, solve.



Area: $\mathbf{8 \times 8} = (4 \times 2) \times 8$
$= 4 \times (2 \times 8)$
$= 4 \times 16$
$= 64$
Area: 64 sq cm

Name _____ Date _____

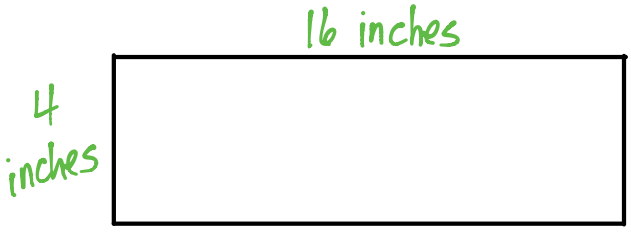
1. A painting has an area of 63 square inches. One side length is 9 inches. What is the other side length?



7 x 9 = 63

The missing side length is 7 inches.

2. Judy's mini dollhouse has one floor and measures 4 inches by 16 inches. What is the total area of the dollhouse floor?

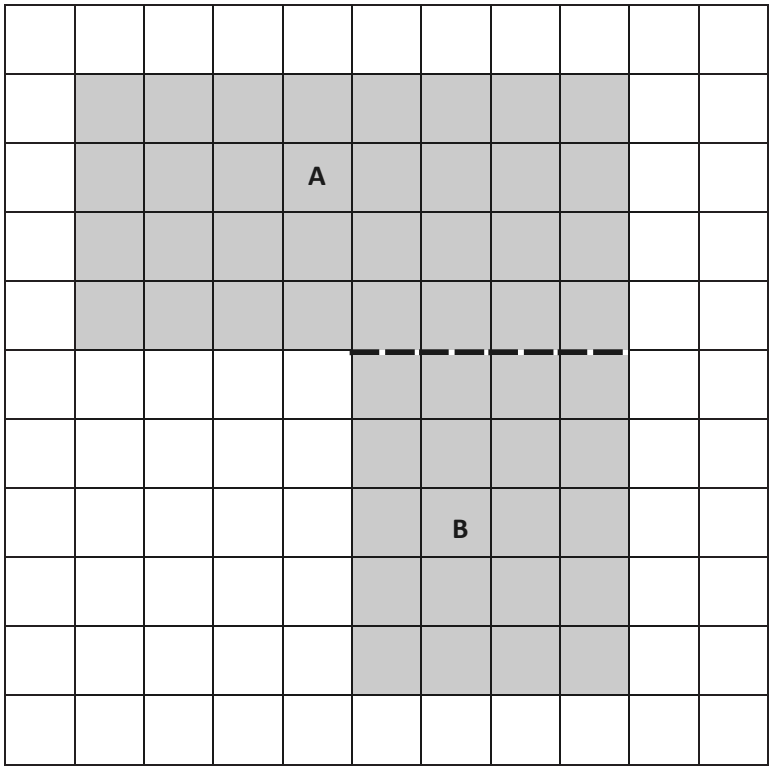


4 x 16 = (4x10) + (4x6)
10 6
= 40 + 24
= 64

The total area of the floor is 64 square inches.

Name _____ Date _____

The following figure is made up of 2 rectangles. Find the total area of the figure.



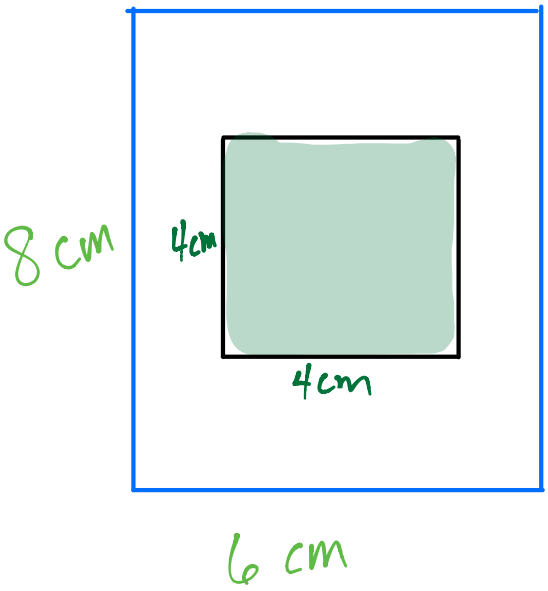
A: 4 x 8 = 32

B: 5 x 4 = 20

Area of A + Area of B: 32 sq units + 20 sq units = 52 sq units

Name _____ Date _____

Mary draws an 8 cm by 6 cm rectangle on her grid paper. She shades a square with a side length of 4 cm inside her rectangle. What area of the rectangle is left unshaded?



Big – small = unshaded

= 8 x 6 – 4 x 4

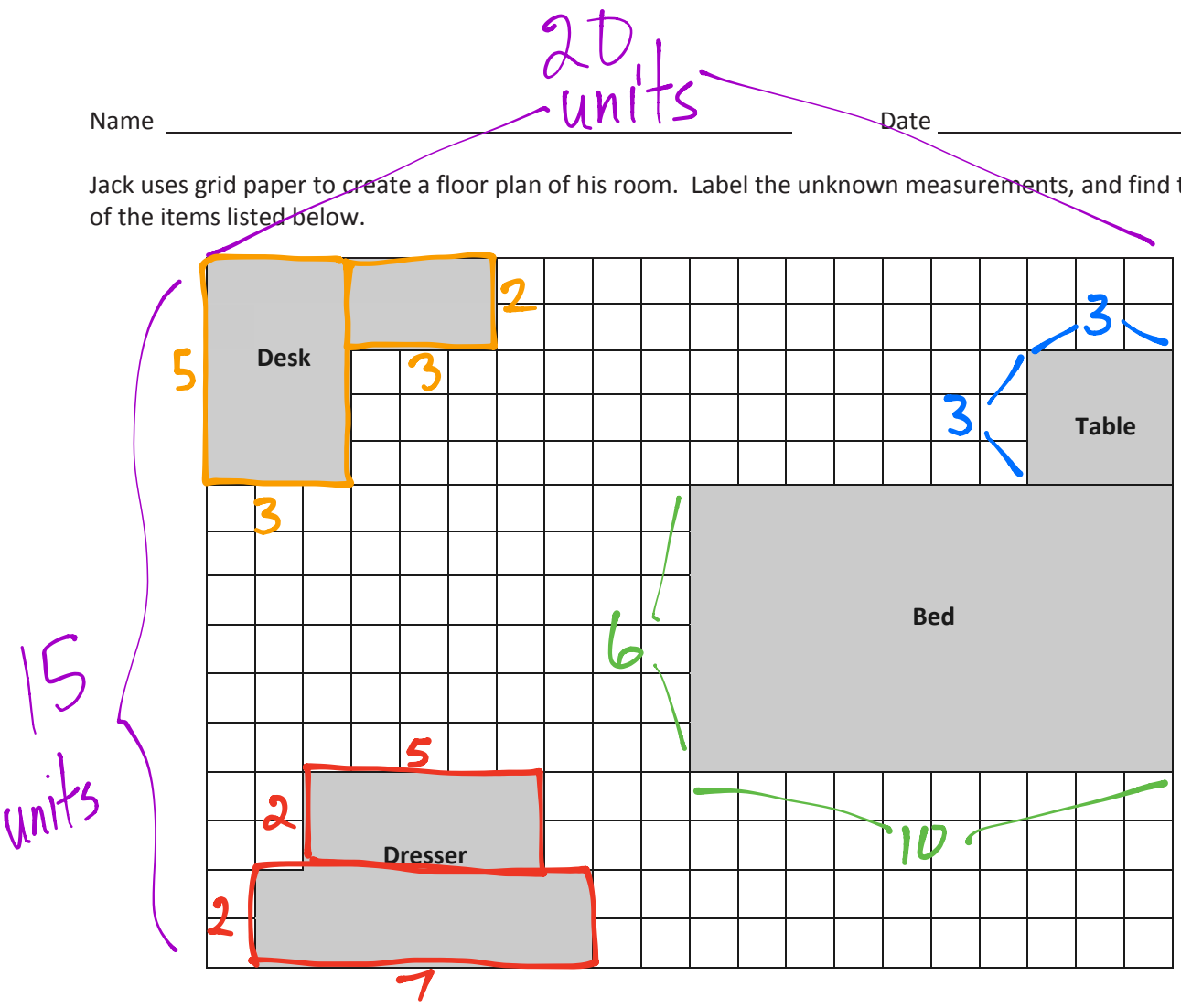
= 48 – 16

= 32 square cm.

The area of the unshaded portion of the rectangle is 32 square centimeters.

Name _____ Date _____

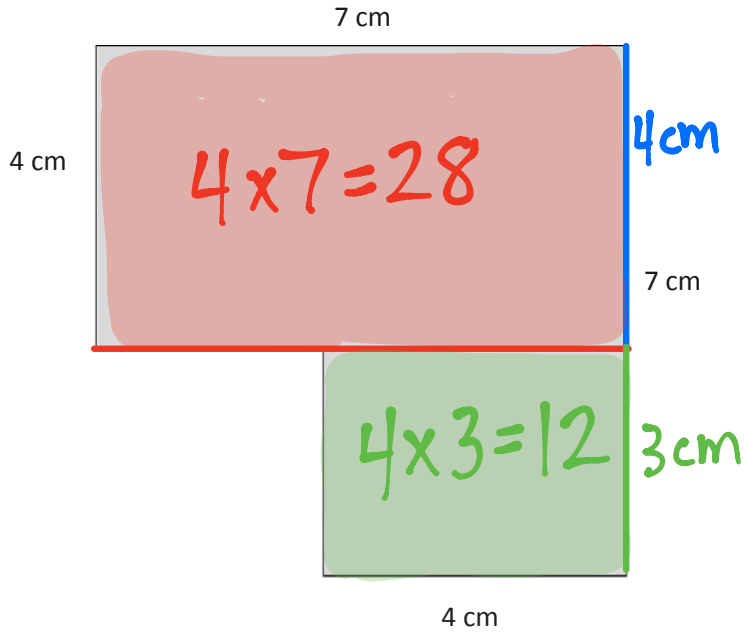
Jack uses grid paper to create a floor plan of his room. Label the unknown measurements, and find the area of the items listed below.



Name	Equations	Total Area
a. Jack's Room	$15 \times 20 = 15 \times 10 + 15 \times 10 = 150 + 150$	300 square units
b. Bed	$6 \times 10 = 60$	60 square units
c. Table	$3 \times 3 = 9$	9 square units
d. Dresser	$2 \times 5 + 2 \times 7 = 10 + 14$	24 square units
e. Desk	$3 \times 5 + 3 \times 2 = 15 + 6$	21 square units

Name _____ Date _____

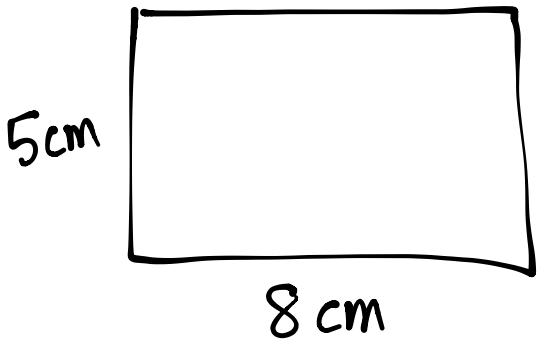
Find the area of the shaded figure. Then, draw and label a rectangle with the same area.



4x7 + 4x3
= 28 + 12
= 40

The area of the figure is 40 square cm.

An example of of rectangle with an area of 40 sq cm is...



5x8=40

Other rectangles are possible.