

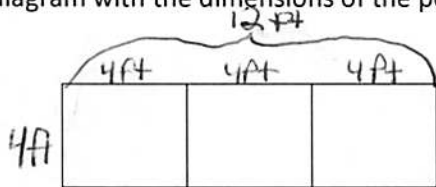
Area and Perimeter Part 2

Name Answer Key

Date _____

1. A rectangular porch is 4 feet wide. It is 3 times as long as it is wide.

a. Label the diagram with the dimensions of the porch.



$$3 \times 4ft = 12ft$$

b. Find the perimeter of the porch.

$$P = 2 \times (l + w)$$

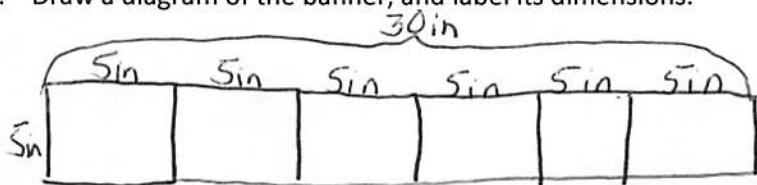
$$P = 2 \times (12 + 4)$$

$$P = 2 \times (16)$$

$$P = 32 \text{ feet}$$

2. A narrow rectangular banner is 5 inches wide. It is 6 times as long as it is wide.

a. Draw a diagram of the banner, and label its dimensions.



$$5in \times 6in = 30in$$

b. Find the perimeter and area of the banner.

$$A = L \times W$$

$$A = 30 \times 5$$

$$A = 150 \text{ sqin}$$

$$P = 2 \times (l + w)$$

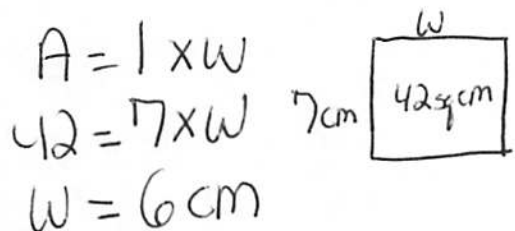
$$P = 2 \times (30 + 5)$$

$$P = 2 \times 35$$

$$P = 70in$$

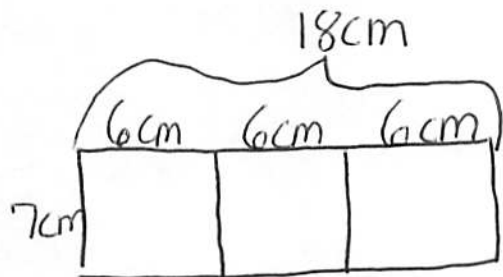
3. The area of a rectangle is 42 square centimeters. Its length is 7 centimeters.

a. What is the width of the rectangle?



~~$P = 2 \times (l + w)$~~
 ~~$P = 2 \times (7 + w)$~~
 ~~$P = (2 \times 7) + (2 \times w)$~~

b. Charlie wants to draw a second rectangle that is the same length but is 3 times as wide. Draw and label Charlie's second rectangle.




c. What is the perimeter of Charlie's second rectangle?

$P = 2 \times (l + w)$
 $P = 2 \times (7 + 18)$
 $P = 2 \times 25$
 $P = \del{2 \times 25} 50 \text{ cm}$

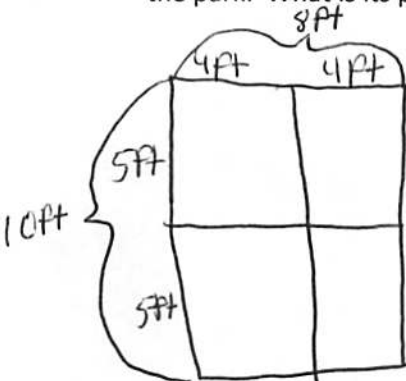
4. The area of Betsy's rectangular sandbox is 20 square feet. The longer side measures 5 feet. The sandbox at the park is twice as long and twice as wide as Betsy's.

a. Draw and label a diagram of Betsy's sandbox. What is its perimeter?



$A = 20 \text{ sq ft}$
 $A = l \times w$
 $20 = 5 \times w$
 $w = 4 \text{ ft}$
 $P = 2 \times (l + w)$
 $P = 2 \times (5 + 4)$
 $P = 2 \times 9$
 $P = 18 \text{ ft}$

b. Draw and label a diagram of the sandbox at the park. What is its perimeter?



$P = 2 \times (l + w)$
 $P = 2 \times (10 + 8)$
 $P = 2 \times 18$
 $P = 36 \text{ ft}$

c. What is the relationship between the two perimeters?

Betsy's sandbox $P = 18 \text{ ft}$
 The Park's sandbox $P = 36 \text{ ft}$

The Park's sandbox's perimeter is twice or double the perimeter of Betsy's sandbox.

d. Find the area of the park's sandbox using the formula $A = l \times w$.

$A = l \times w$
 $A = 10 \times 8$
 $A = 80 \text{ sq ft}$

- e. The sandbox at the park has an area that is how many times that of Betsy's sandbox?

~~Betsy's~~ Betsy's Sandbox $A = 5 \times 4 = 20 \text{ sq ft}$

Park's Sandbox $A = 10 \times 8 = 80 \text{ sq ft}$

The Park's Sandbox area is 4x greater than Betsy's sandbox area.

- f. Compare how the perimeter changed with how the area changed between the two sandboxes. Explain what you notice using words, pictures, or numbers.

The perimeter of the Park's sandbox is double the perimeter of Betsy's sandbox

Park's $P = 36 \text{ ft}$ Betsy's $P = 18 \text{ ft}$
 ($18 + 18 = 36$)



The ~~area~~ Park's area is 4x's the area of Betsy's sandbox.

Park's $A = 80 \text{ sq ft}$ Betsy's $A = 20 \text{ sq ft}$
 ($20 \times 4 = 80$)

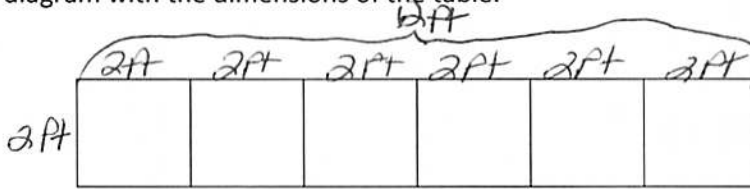
When the length and width are doubled, then the perimeter doubles, but the area quadruples or is 4x larger.

Name Answer Key

Date _____

1. A table is 2 feet wide. It is 6 times as long as it is wide.

a. Label the diagram with the dimensions of the table.



b. Find the perimeter of the table.

$$P = 2 \times (l + w)$$

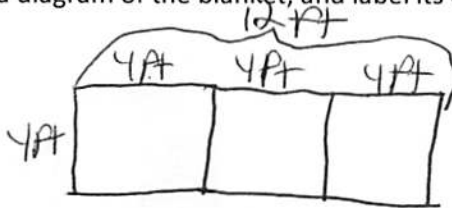
$$P = 2 \times (12 + 2)$$

$$P = 2 \times 14$$

$$P = 28 \text{ ft}$$

2. A blanket is 4 feet wide. It is 3 times as long as it is wide.

a. Draw a diagram of the blanket, and label its dimensions.



b. Find the perimeter and area of the blanket.

$$P = 2 \times (l + w)$$

$$P = 2 \times (12 + 4)$$

$$P = 2 \times 16$$

$$P = 32 \text{ ft}$$

$$A = l \times w$$

$$A = 12 \times 4$$

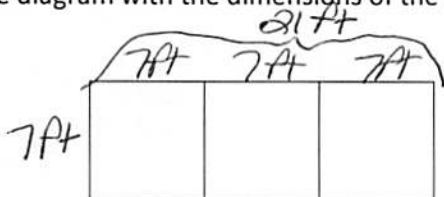
$$A = 48 \text{ sq ft}$$

Name _____

Date _____

1. A rectangular pool is 7 feet wide. It is 3 times as long as it is wide.

a. Label the diagram with the dimensions of the pool.



b. Find the perimeter of the pool.

$$P = 2 \times (l + w)$$

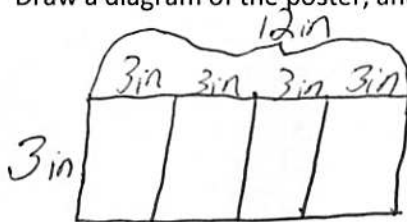
$$P = 2 \times (21 + 7)$$

$$P = 2 \times 28$$

$$P = 56 \text{ ft}$$

2. A poster is 3 inches long. It is 4 times as wide as it is long.

a. Draw a diagram of the poster, and label its dimensions.



b. Find the perimeter and area of the poster.

$$P = 2 \times (l + w)$$

$$P = 2 \times (12 + 3)$$

$$P = 2 \times 15$$

$$P = 30 \text{ in}$$

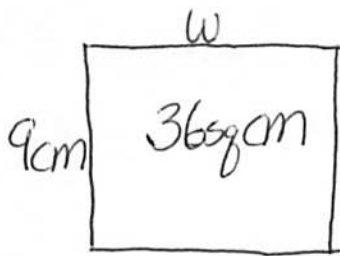
$$A = l \times w$$

$$A = 12 \times 3$$

$$A = 36 \text{ sq in}$$

3. The area of a rectangle is 36 square centimeters, and its length is 9 centimeters.

a. What is the width of the rectangle?



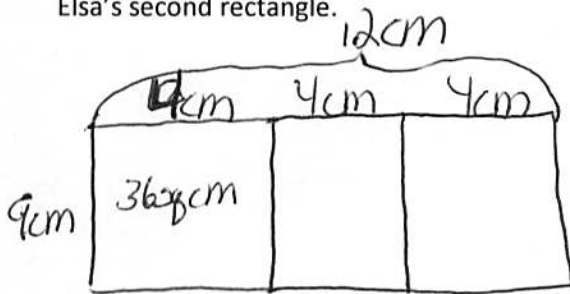
$$A = l \times w$$

$$36 = 9 \times w$$

$$36 \div 9 = 4$$

$$w = 4 \text{ cm}$$

b. Elsa wants to draw a second rectangle that is the same length but is 3 times as wide. Draw and label Elsa's second rectangle.



~~9cm~~

$$4 \times 3 = 12 \text{ cm}$$

c. What is the perimeter of Elsa's second rectangle?

$$P = 2 \times (l + w)$$

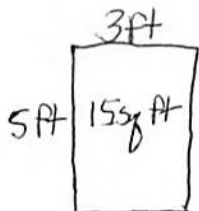
$$P = 2 \times (9 + 12)$$

$$P = 2 \times 21$$

$$P = 42 \text{ cm}$$

4. The area of Nathan's bedroom rug is 15 square feet. The longer side measures 5 feet. His living room rug is twice as long and twice as wide as the bedroom rug.

a. Draw and label a diagram of Nathan's bedroom rug. What is its perimeter?



$$A = l \times w$$

$$15 = 5 \times w$$

$$15 \div 5 = 3$$

$$w = 3 \text{ ft}$$

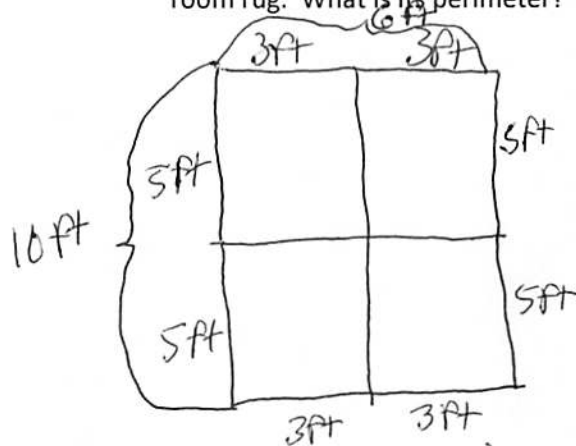
$$P = 2 \times (l + w)$$

$$P = 2 \times (5 + 3)$$

$$P = 2 \times 8$$

$$P = 16 \text{ ft}$$

b. Draw and label a diagram of Nathan's living room rug. What is its perimeter?



$$P = 2 \times (l + w)$$

$$P = 2 \times (10 + 6)$$

$$P = 2 \times 16$$

$$P = 32 \text{ ft}$$

c. What is the relationship between the two perimeters?

The perimeter of Nathan's living room is double the perimeter of his bedroom.

living room $P = 32 \text{ ft}$ bedroom $P = 16 \text{ ft}$
 $16 \text{ ft} \times 2 = 32 \text{ ft}$ or $16 \text{ ft} + 16 \text{ ft} = 32 \text{ ft}$

d. Find the area of the living room rug using the formula $A = l \times w$.

$$A = l \times w$$

$$A = 10 \times 6$$

$$A = 60 \text{ sq ft}$$