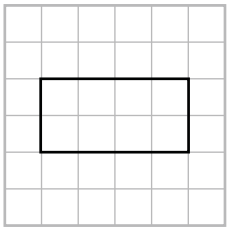
Name _____ Date _____

BASIC MEASURES

Perimeter is the distance around a shape.

Add the lengths to find the perimeter:
$4 + 2 + 4 + 2 = 12$

The perimeter is 12 units.



Area is the number of square units needed to cover a shape.

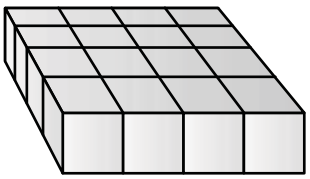
Count the total number of squares in the rectangle above to find its area.

8 squares cover the rectangle.

The area is 8 square units.

Volume is the number of cubes it takes to fill a space.

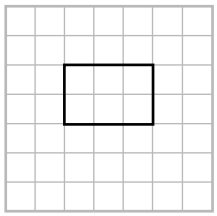
Count the number of cubes to find the volume of the figure.



There are 16 cubes.
The volume is 16 cubic units.

Find each perimeter. Then find each area in square units.

1.



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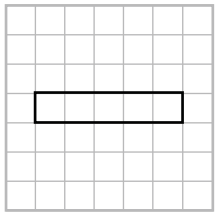
2.



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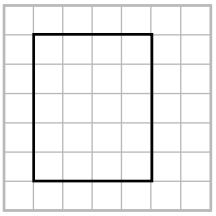
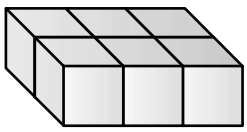
3.



_____

Find each volume in cubic units.

4.



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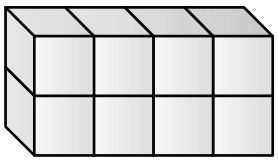
5.



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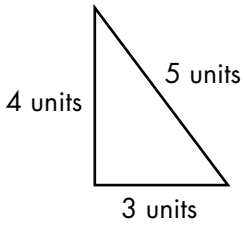
Name _____ Date _____

BASIC MEASURES

Perimeter is the distance around a shape.

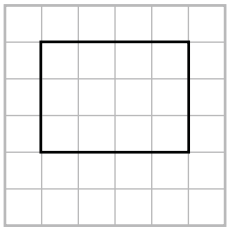
Add the lengths to find the perimeter:
3 units + 4 units + 5 units = 12 units

The perimeter is 12 units.



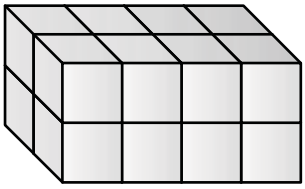
Area is the number of square units needed to cover a shape exactly.

12 squares cover the rectangle.
The area is 12 square units.



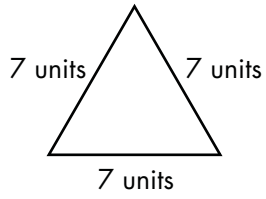
Volume is the number of unit cubes it takes to fill a space exactly.

There are 16 unit cubes.
The volume is 16 cubic units.



Find each perimeter.

1.



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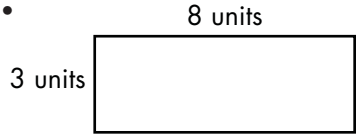
2.



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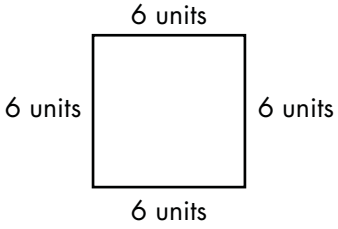
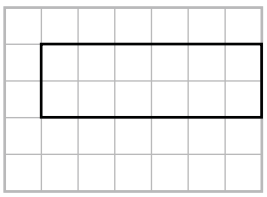
3.



_____

Find the area.

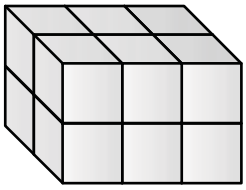
4.



_____

Find the volume.

5.



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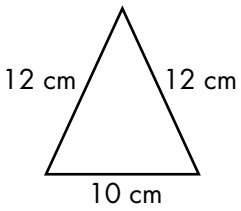
Name _____ Date _____

BASIC MEASURES

Perimeter is the distance around a shape.

Add the lengths of all the sides to find the perimeter:
12 cm + 12 cm + 10 cm = 34 cm

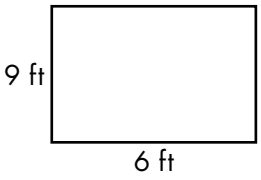
The perimeter is 34 centimeters.



Area is the number of square units needed to cover a shape. Multiply the length by the width to find the area of a rectangle.

A = 9 ft × 6 ft = 54 sq ft

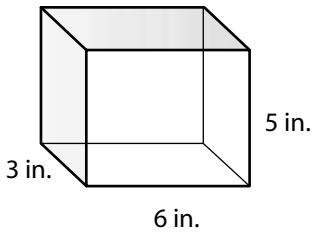
The area of the rectangle is 54 square feet.



Volume is the number of cubic units it takes to fill a space. Multiply the length by the width by the height to find the volume of a box.

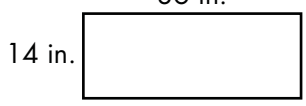
V = 6 in. × 3 in. × 5 in. = 90 cu. in.

The volume of the box is 90 cubic inches.



Find the perimeter.

1.



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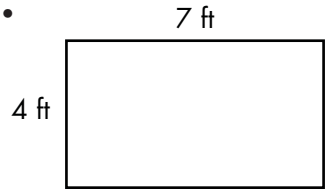
Find the area.

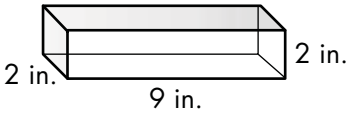
2.



_____

Find the volume.

3.



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AREAS AND PERIMETERS

Figures with the same perimeter can have different areas.

Add the side lengths to find the perimeter:

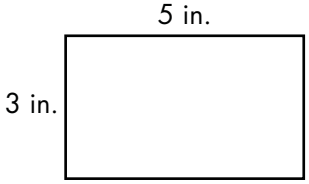
$P = 6 + 2 + 6 + 2 = 16$

Perimeter: 16 in.

Multiply the length by the width to find the area:

$A = 6 \times 2 = 12$

Area: 12 square inches



Add the side lengths to find the perimeter:

$P = 5 + 3 + 5 + 3 = 16$

Perimeter: 16 in.

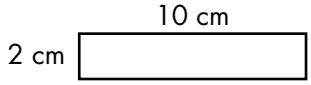
Multiply the length by the width to find the area:

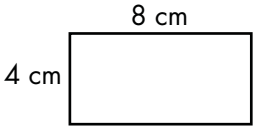
$A = 5 \times 3 = 15$

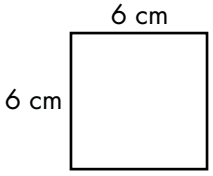
Area: 15 square inches

Find the perimeter and area of each figure. Which figure in each group has the greatest area?

1.



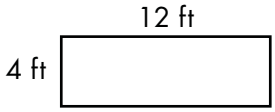


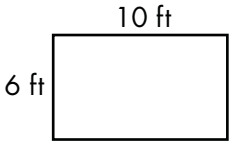


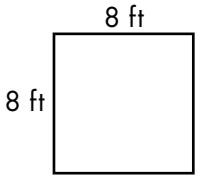
Perimeter: _____ _____ _____

Area: _____ _____ _____

2.







Perimeter: _____ _____ _____

Area: _____ _____ _____

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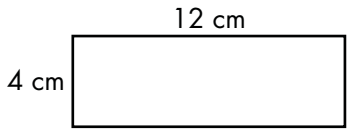
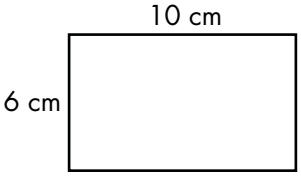
AREAS AND PERIMETERS

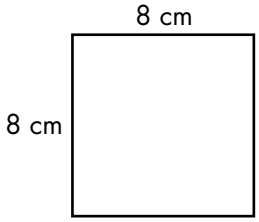
Figures with the same perimeter can have different areas.



Rectangle *A*



Rectangle *B*



Square C

Perimeter of Rectangle *A*
$P = 12 + 4 + 12 + 4 = 32$
Perimeter = 32 cm

Perimeter of Rectangle *B*
$P = 10 + 6 + 10 + 6 = 32$
Perimeter = 32 cm

Perimeter of Square *C*
$P = 8 + 8 + 8 + 8 = 32$
Perimeter = 32 cm

Area of Rectangle *A*
$A = l \times w = 12 \times 4 = 48$
Area = 48 sq cm

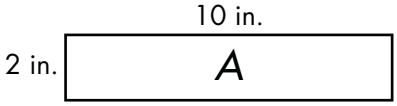
Area of Rectangle *B*
$A = l \times w = 10 \times 6 = 60$
Area = 60 sq cm

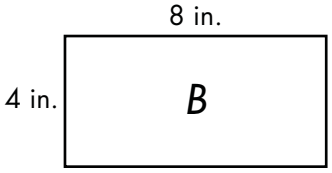
Area of Square *C*
$A = l \times w = 8 \times 8 = 64$
Area = 64 sq cm

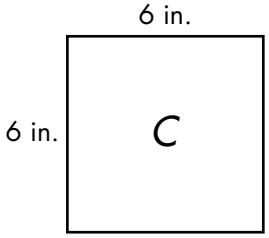
As the sides of the rectangles get closer in length, the area increases but the perimeter does not change.

The perimeters are all the same for the rectangles within a group. Predict the figure in each group that will have the greatest area. Then find the perimeter and area of each figure.

1.







Prediction: _____

Perimeter: A: _____ B: _____ C: _____

Area: A: _____ B: _____ C: _____

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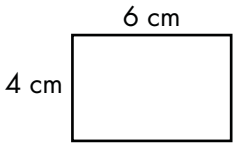
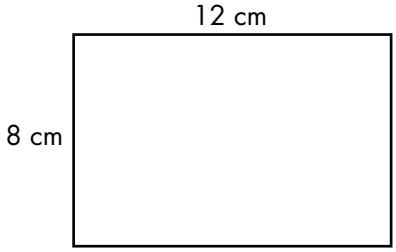
AREAS AND PERIMETERS

When the lengths of sides of a figure are doubled, keeping the figure the same shape, the perimeter is doubled, but the area is increased by 4 times.





Rectangle *A*

Perimeter of Rectangle *A*
$P = 6 + 4 + 6 + 4 = 20$
Perimeter = 20 cm

Rectangle *B*

Perimeter of Rectangle *B*
$P = 12 + 8 + 12 + 8 = 40$
Perimeter = 40 cm

As the lengths of the sides are doubled, the perimeter doubles.

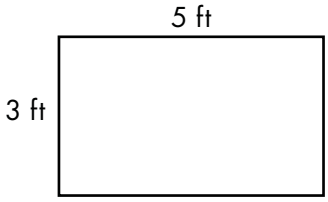
Area of Rectangle *A*
$A = l \times w = 6 \times 4 = 24$
Area = 24 sq cm

Area of Rectangle *B*
$A = l \times w = 12 \times 8 = 96$
Area = 96 sq cm

As the lengths of the sides are doubled, the area is multiplied by 4.

**Find the perimeter and area of each figure.
Then double the length and width of each figure.
Predict the new perimeter and area. Then check the new perimeter and area.**

1.



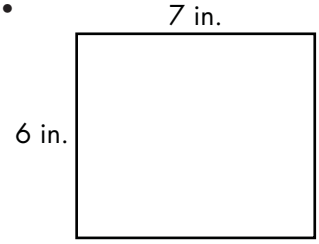
P = _____

A = _____

_____

_____

2.



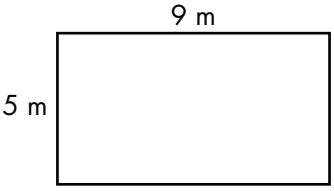
P = _____

A = _____

_____

_____

3.



P = _____

A = _____

_____

_____

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