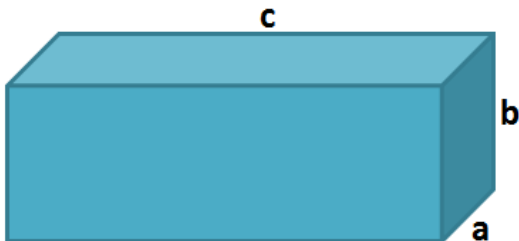


Name _____

Date _____

Determining the Surface Area of a Right Prism

In this worksheet, we will practice determining the surface area of a right (rectangular) prism. Finding the surface area of a rectangular prism is the same as finding and adding together the area of its six rectangles that cover it.



$a = 4$
$b = 4$
$c = 8$

The formula that we use to find the surface area of a rectangular prism is:
 Surface Area = $2ab + 2bc + 2ac$

The surface area of this rectangular prism is
 $(2 \times 4 \times 4) + (2 \times 4 \times 8) + (2 \times 4 \times 8) = 32 + 64 + 64 = 160 \text{ units}^2$

Exercise Questions:

1. Find the surface area of a rectangular prism, where:

$$a=3 \quad b=3 \quad c=6$$

The surface area is _____ units².

2. Find the surface area of a rectangular prism, where:

$$a=5 \quad b=5 \quad c=10$$

The surface area is _____ units².

3. Find the surface area of a rectangular prism, where:

$$a=6 \quad b=6 \quad c=9$$

The surface area is _____ units².

4. Find the surface area of a rectangular prism, where:

$$a=1 \quad b=1 \quad c=4$$

The surface area is _____ units².

5. Find the surface area of a rectangular prism, where:

$$a=2 \quad b=2 \quad c=8$$

The surface area is _____ units².

6. Find the surface area of a rectangular prism, where:

$$a=8 \quad b=8 \quad c=20$$

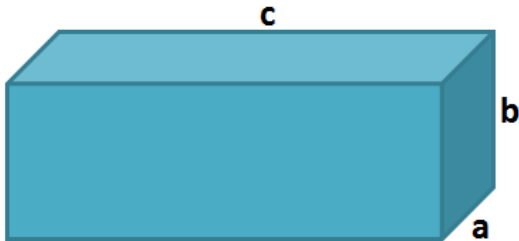
The surface area is _____ units².



Answer Key

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In this worksheet, we will practice determining the surface area of a right (rectangular) prism. Finding the surface area of a rectangular prism is the same as finding and adding together the area of its six rectangles that cover it.



$$\begin{array}{l} a = 4 \\ b = 4 \\ c = 8 \end{array}$$

The formula that we use to find the surface area of a rectangular prism is:
Surface Area = $2ab + 2bc + 2ac$

The surface area of this rectangular prism is
 $(2 \times 4 \times 4) + (2 \times 4 \times 8) + (2 \times 4 \times 8) = 32 + 64 + 64 = 160 \text{ units}^2$

Exercise Questions:

1. Find the surface area of a rectangular prism, where:

$$a=3 \quad b=3 \quad c=6$$

The surface area is 90 units².

2. Find the surface area of a rectangular prism, where:

$$a=5 \quad b=5 \quad c=10$$

The surface area is 250 units².

3. Find the surface area of a rectangular prism, where:

$$a=6 \quad b=6 \quad c=9$$

The surface area is 288 units².

4. Find the surface area of a rectangular prism, where:

$$a=1 \quad b=1 \quad c=4$$

The surface area is 18 units².

5. Find the surface area of a rectangular prism, where:

$$a=2 \quad b=2 \quad c=8$$

The surface area is 72 units².

6. Find the surface area of a rectangular prism, where:

$$a=8 \quad b=8 \quad c=20$$

The surface area is 786 units².



Answer Key

