



**Math Virtual Learning**

**6th Grade Math**

**Surface Area of Rectangular Prisms**

**April 28, 2020**



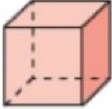
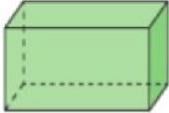
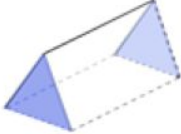
# 6th Grade Math

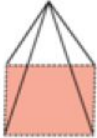

## Lesson: April 28, 2020

### **Objective/Learning Target:**

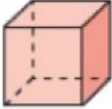
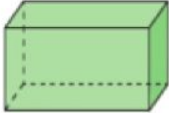
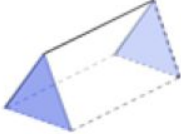
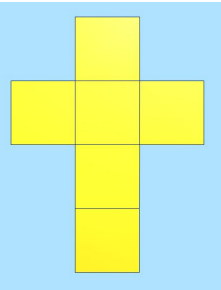
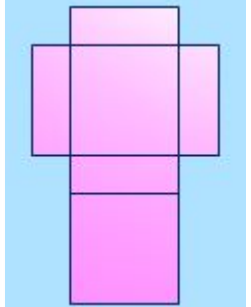
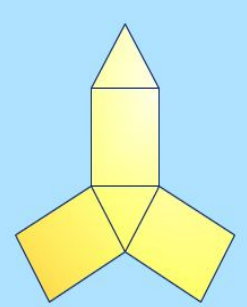
Students will use nets to find the surface area of rectangular prisms.

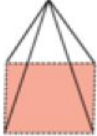

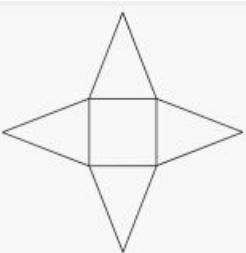
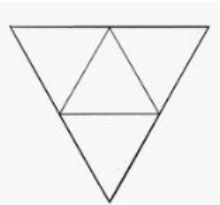
# Daily Warm-up

Name	Cube	Rectangular Prism	Triangular Prism
Picture			
Vertices			
Edges			
Faces			
Base(s)	Opposite parallel faces are the bases.		
One Example of a Net			

Name	Square Pyramid	Triangular Pyramid
Picture		
Vertices		
Edges		
Faces		
Base(s)	One base for which the solid is named.	
One Example of a Net		

# Daily Warm-up Answers

Name	Cube	Rectangular Prism	Triangular Prism
Picture			
Vertices	8	8	6
Edges	12	12	9
Faces	6	6	5
Base(s)	Opposite parallel faces are the bases.		
One Example of a Net			

Name	Square Pyramid	Triangular Pyramid
Picture		
Vertices	5	4
Edges	8	6
Faces	5	4
Base(s)	One base for which the solid is named.	
One Example of a Net		

A cube, rectangular prism, sphere, cone and cylinder are the basic 3-dimensional shapes we see around us.

## 3-Dimensional Shapes



Cube



Rectangular  
Prism



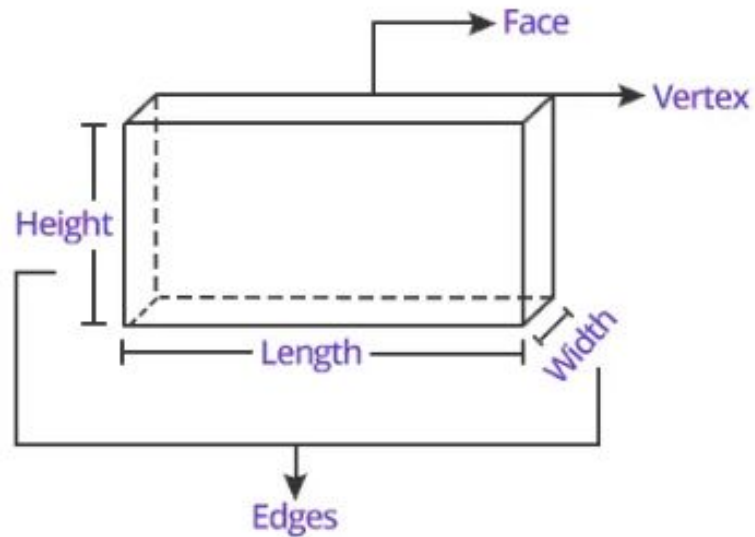
Sphere



Cone



Cylinder



# Lesson

[Surface Area Using Nets](#)

[YouTube Video](#)

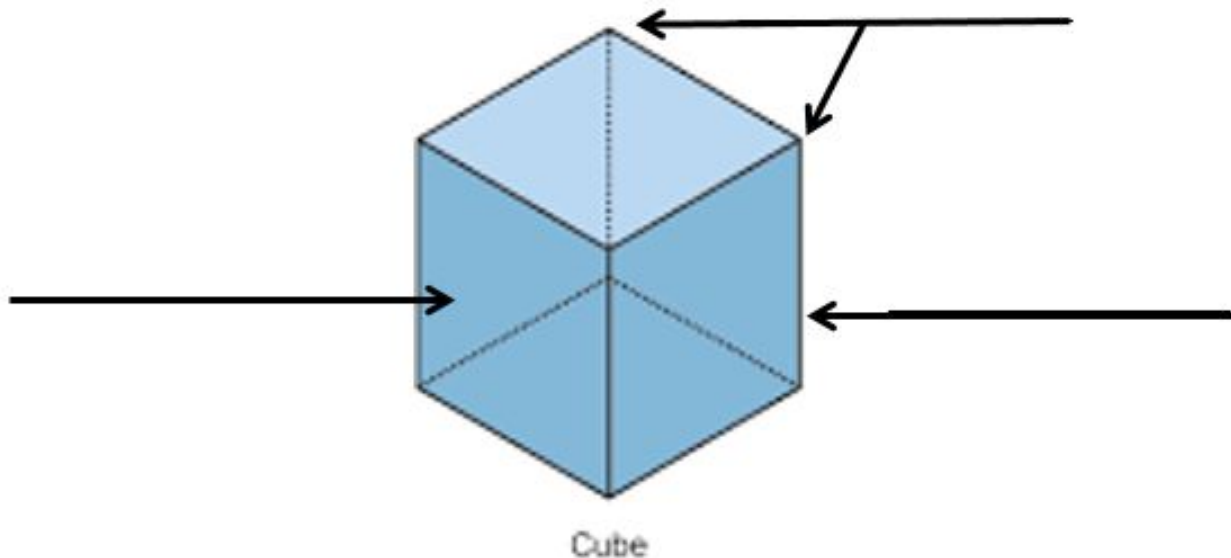
# Practice

[Surface Area Practice](#)

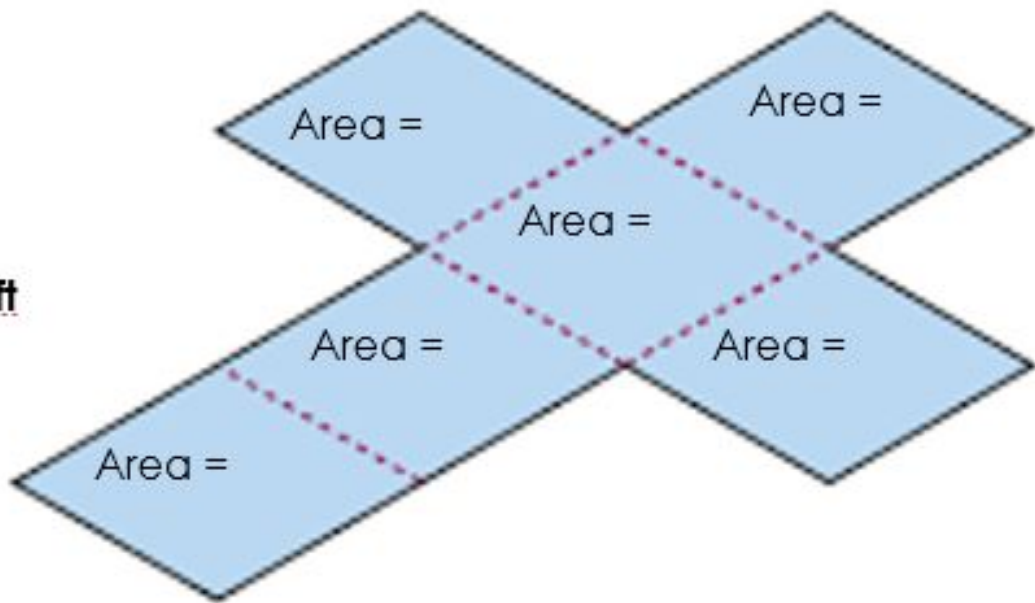
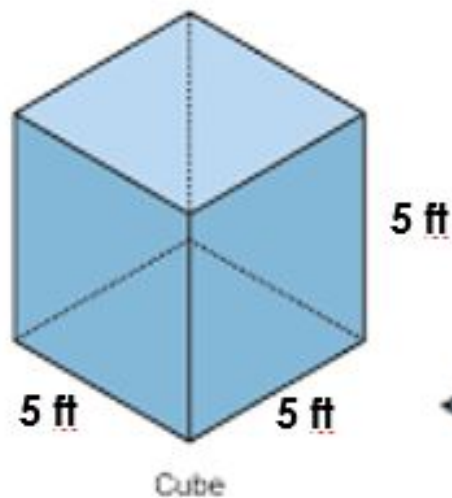
# Surface Area

**Surface Area is the total area of surface of a 3-dimensional object.** To find the **Surface Area** of a 3-D figure, first find the Area of each face and then add them together!

1.) Label the parts of the solid figure.



2.) Find the Surface Area of the cube by adding the areas of each face. Remember area is a 2-D measurement in squared units.



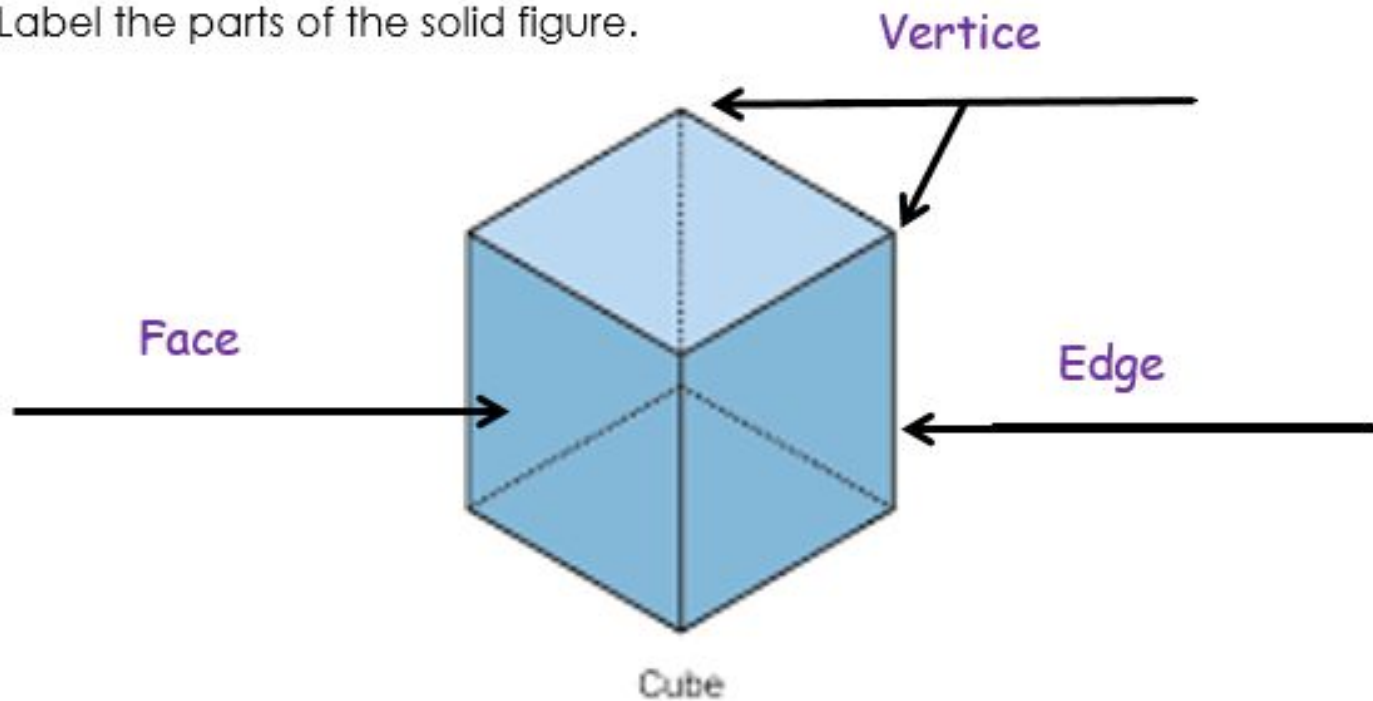
Net of a cube

**Surface Area** of cube = \_\_\_\_\_

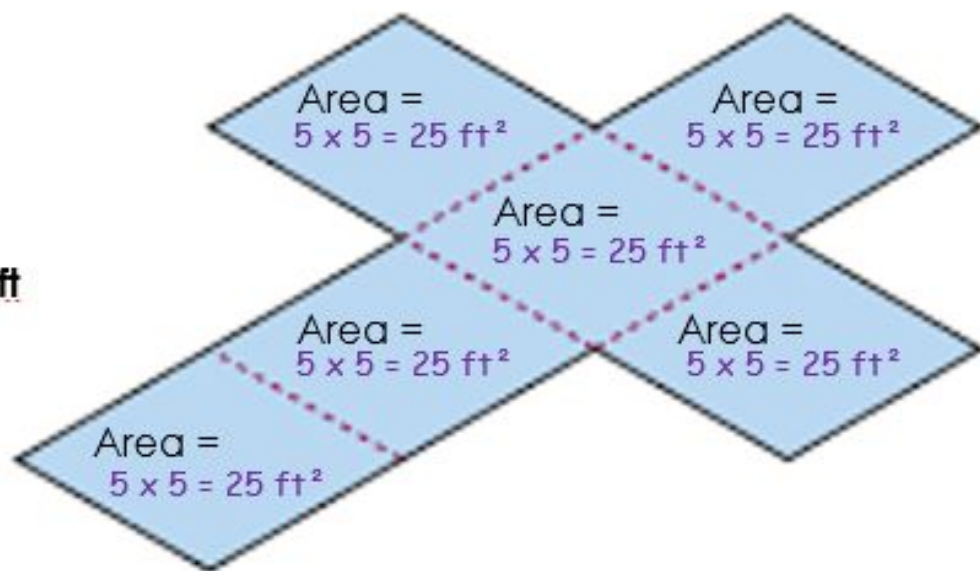
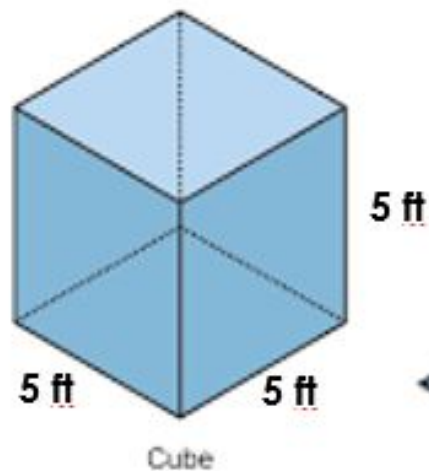


**Surface Area is the total area of surface of a 3-dimensional object.** To find the **Surface Area** of a 3-D figure, first find the Area of each face and then add them together!

3.) Label the parts of the solid figure.



- 4.) Find the Surface Area of the cube by adding the areas of each face. Remember area is a 2-D measurement in squared units.



Net of a cube

$$\text{Surface Area of cube} = \frac{6 \times 25 = 150 \text{ ft}^2}{(25 + 25 + 25 + 25 + 25 + 25 = 150 \text{ ft}^2)}$$

# Practice

Use this link to explore different nets of rectangular prisms.

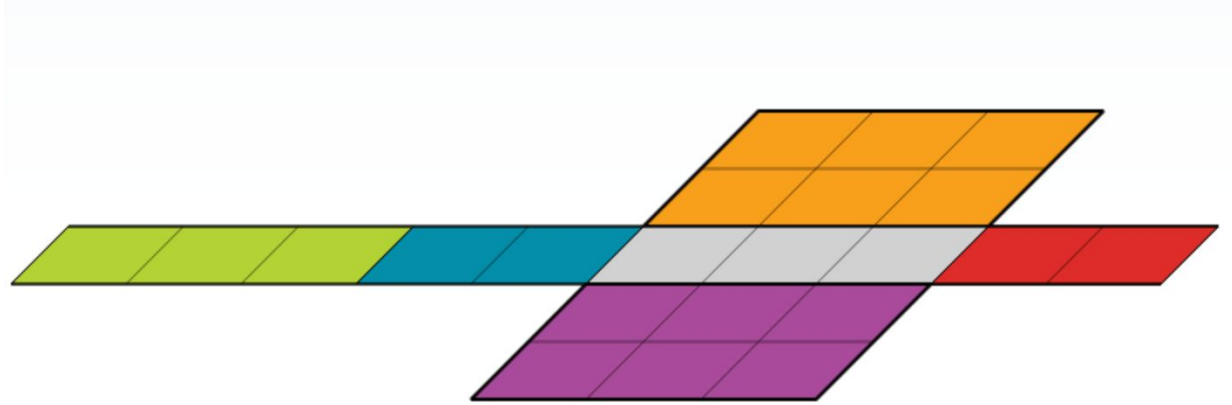
[Rectangular Prism Generator](#)

Click this gear button to build the rectangular prisms on the next slides.



# Quick Tips

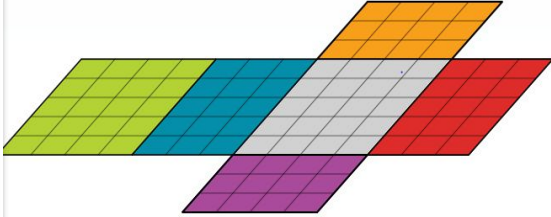
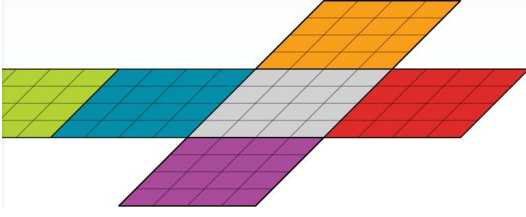
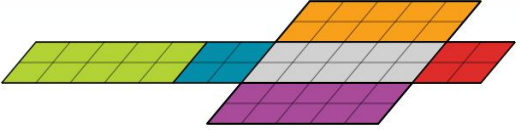
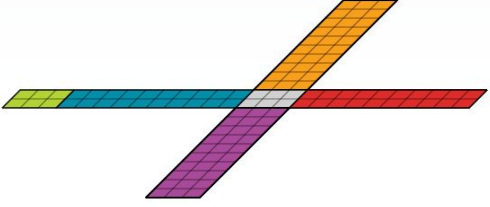
Surface Area is the **wrapping** of a 3D shape- the number of square units that make up the net



*22 square units in the surface area of this rectangular prism*

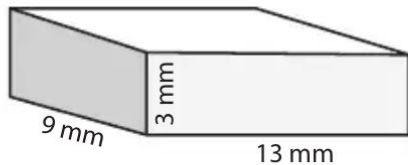
<b>Box Number</b>	<b>Width</b>	<b>Depth</b>	<b>Height</b>	<b>Surface Area</b>	<b>Sketch Net</b>
<b>Box #1</b>	4 units	5 units	3 units		
<b>Box #2</b>	4 units	4 units	4 units		
<b>Box #3</b>	5 units	2 units	2 units		
<b>Box #4</b>	3 units	2 units	10 units		

# ANSWERS

Box Number	Width	Depth	Height	Surface Area	Sketch Net
Box #1	4 units	5 units	3 units	94 sq units	
Box #2	4 units	4 units	4 units	96 sq units	
Box #3	5 units	2 units	2 units	48 sq units	
Box #4	3 units	2 units	10 units	112 sq units	

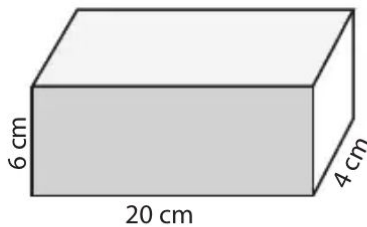
Find the surface area of each rectangular prism.

1)



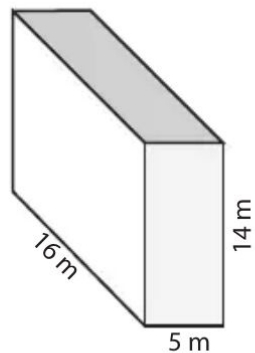
Surface Area = \_\_\_\_\_

2)



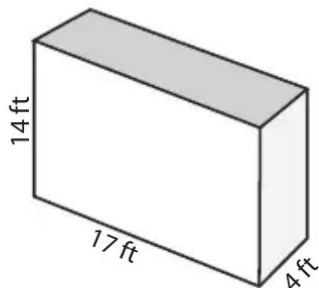
Surface Area = \_\_\_\_\_

3)



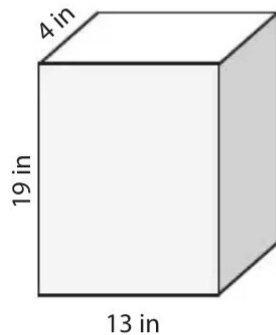
Surface Area = \_\_\_\_\_

4)



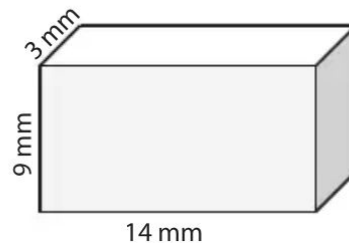
Surface Area = \_\_\_\_\_

5)



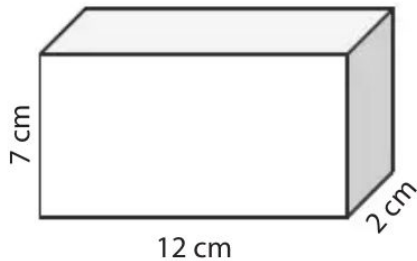
Surface Area = \_\_\_\_\_

6)



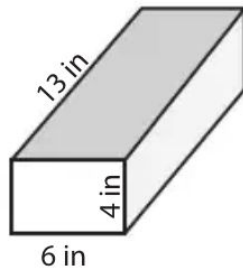
Surface Area = \_\_\_\_\_

7)



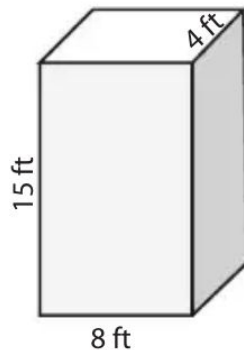
Surface Area = \_\_\_\_\_

8)



Surface Area = \_\_\_\_\_

9)



Surface Area = \_\_\_\_\_

10) A gift box in the shape of a rectangular prism has 20 centimeters length, 14 centimeters width and 10 centimeters height. How much the paper will you need to wrap the gift box?

Surface Area = \_\_\_\_\_



## Practice Answers

1. 366 sq mm

2. 448 sq mm

3. 748 sq mm

4. 724 sq ft

5. 750 sq in

6. 390 sq mm

7. 244 sq mm

8. 308 sq in

9. 424 sq ft

10. 1240 sq cm

## **Additional Practice:**

Click on the link below to get additional practice and to check your understanding!

**Practice:**

[Khan Academy](#)

[Online Surface Area Game](#)

**Summary/Reflection:**

How well did I do? What could I have done differently?