Math 6 - Unit 5: Area & Volume
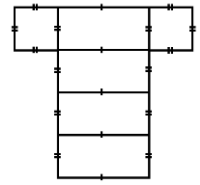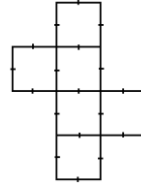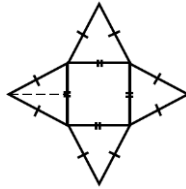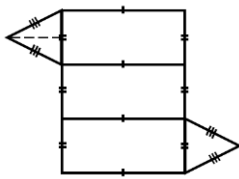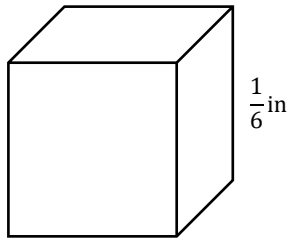*End of Unit Test Study Guide*

Name: _____

Class Period: 1   2   3   4   Date: _____

1) How could you determine the surface area of a triangular prism?

2) Is painting your house a real world example of surface area or volume?
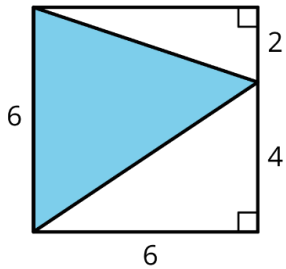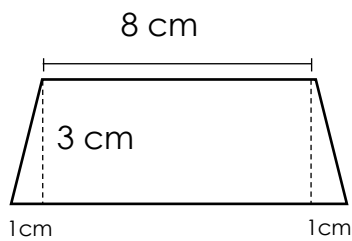
3) What shape is formed by folding the following nets?

4)

$\frac{1}{6}$ in

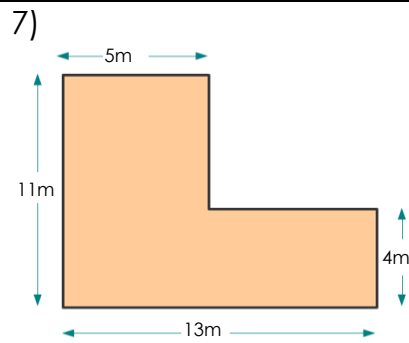**Volume of the Cube:** _____

5) Find the area of the shaded region.

2

6

4

6

Area: _____

6)

8 cm

3 cm

1cm   1cm

Area: _____
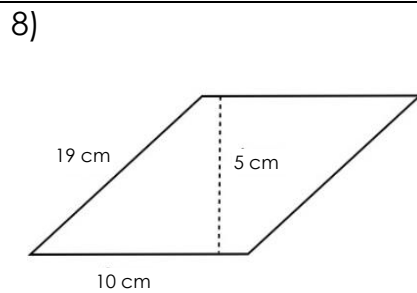
7)

5m
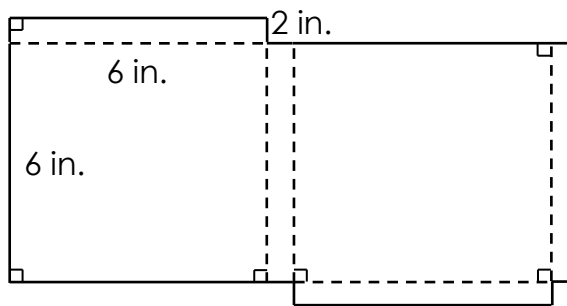
11m

4m

13m

Area: _____

8)

19 cm
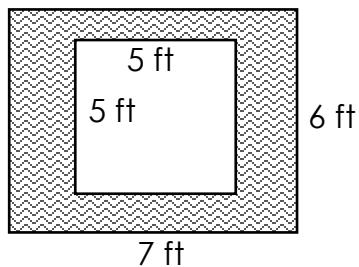
5 cm

10 cm

Area: _____

9) A box is covered with wrapping paper with no overlap. The net of the box is shown below.

How many square inches of wrapping paper is needed to cover the surface area of the box?
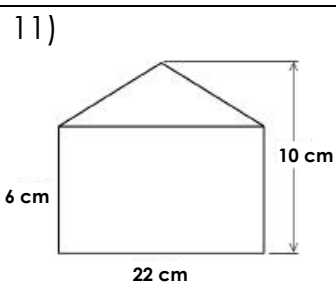
2 in.

6 in.

6 in.

Surface Area: _____

10) What is the area of the shaded frame?
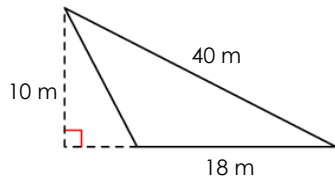
5 ft

5 ft

6 ft

7 ft

Area: _____

11)

10 cm

6 cm

22 cm

Area: _____

12)

40 m

10 m

18 m

Area: _____

13) A fish tank is shown below. How many cubic inches of water can fit inside the tank?

4 ½ in.

12 in.

10 in.

Volume: _____

14)

6 cm

4 cm

5 cm
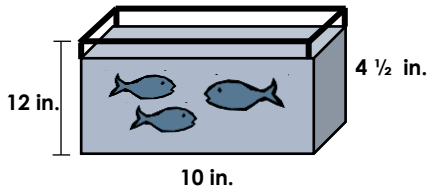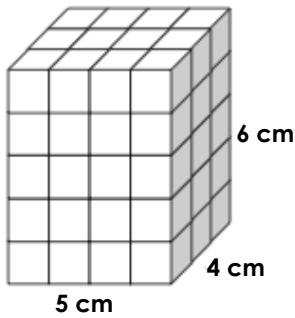
Total Square cm needed to wrap the outside of the box:

Surface Area: _____

15)

5 cm   5 cm

3 cm

15 cm

4 cm
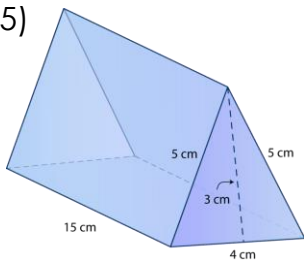
Surface Area: _____

15) How much paper is needed to wrap a cube with a side length of 10 cm?

16) Draw 2 different nets that could be folded to make a cube.

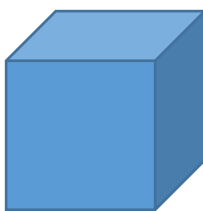17) A rectangular pool is 10 feet long, 14 ½ feet wide, and 6 feet deep. How many cubic feet of water can it hold?

18) Give a real world example of something that relates to volume.

19) If carpet costs $5 per square yard, how much would it cost to carpet a rectangular room that is 4.5 yards wide and 15 yards long?

20) How many 2 in cubes can fit inside an 8 in cube?

2 in

8 in

Math 6 – Unit 5: Area & Volume

End of Unit Test Study Guide **ANSWER KEY**
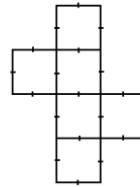
Name: _____

Class Period: 1 2 3 4 Date: _____

1) How could you determine the surface area of a triangular prism? **Find the area of the bases (triangles) and the sides (rectangles) and add them all together.**

2) Is painting your house a real world example of surface area or volume? **Surface Area**

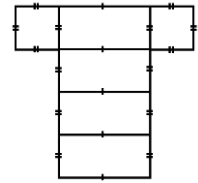3) What shape is formed by folding the following nets?
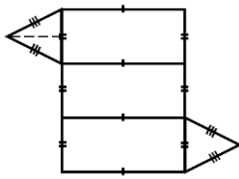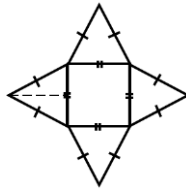
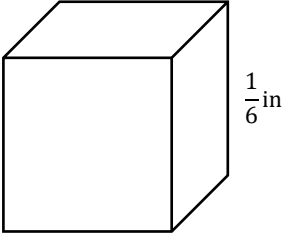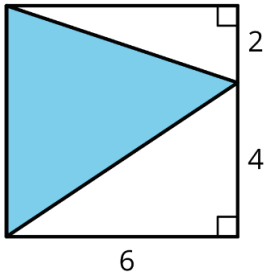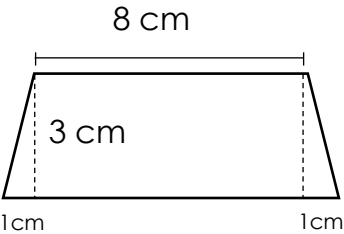| **Triangular Prism** | **Square Pyramid** | **Cube** | **Rectangular Prism** |

4)

$\frac{1}{6}$ in

Volume of the Cube: $\frac{1}{216}$ **in³**

5) Find the area of the shaded region.

6

2

4

6

Area: 18 units²

6)

8 cm

3 cm

1cm   1cm

Area: 27 cm²

7)

5m
11m
4m
13m

Area: 87 m²

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8)

19 cm
5 cm
10 cm
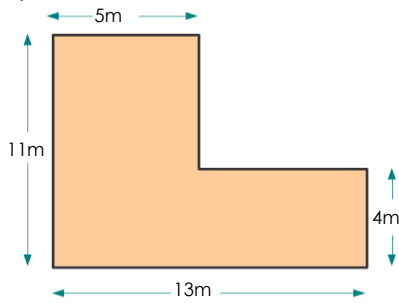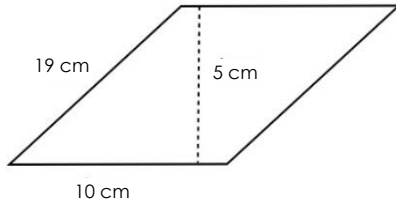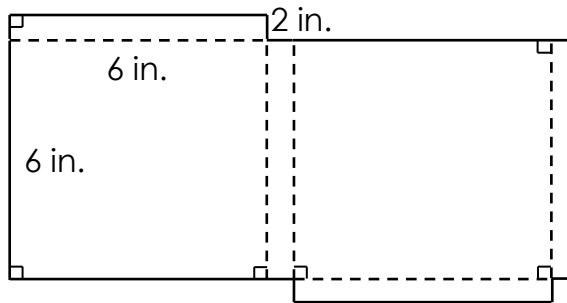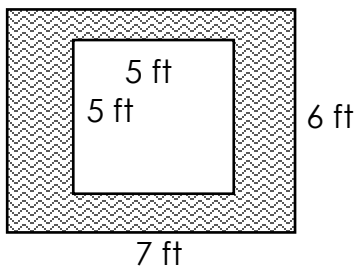
Area: 50 cm²

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9) A box is covered with wrapping paper with no overlap. The net of the box is shown below.

How many square inches of wrapping paper is needed to cover the surface area of the box?

2 in.
6 in.
6 in.

Surface Area: 120 in²

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10) What is the area of the shaded frame?

5 ft
5 ft
6 ft
7 ft

Area: 17 ft²

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11)

10 cm
6 cm
22 cm
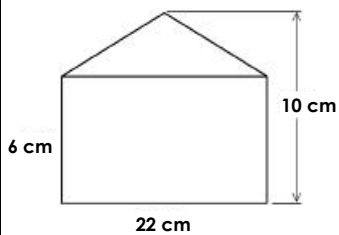
Area: 176 cm²

12) 40 m 10 m 18 m	**Area: 90 m²**
13) A fish tank is shown below. How many cubic inches of water can fit inside the tank? 4 ½ in. 12 in. 10 in.	**Volume: 540 in³**
14) 6 cm 4 cm 5 cm	**Total Square cm needed to wrap the outside of the box:** **Surface Area: 148 units²**
15) 5 cm 5 cm 3 cm 15 cm 4 cm	**Surface Area: 222 cm²**

15) How much paper is needed to wrap a cube with a side length of 10 cm? 600 cm²
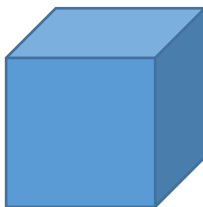
16) Draw 2 different nets that could be folded to make a cube.
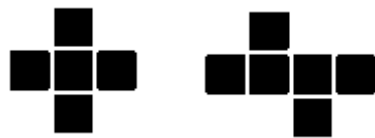
17) A rectangular pool is 10 feet long, 14 ½ feet wide, and 6 feet deep. How many cubic feet of water can it hold? **870 ft³**

18) Give a real world example of something that relates to volume. **How much water can my pasta pot hold? (That is one example, there are a ton!)**

19) If carpet costs $5 per square yard, how much would it cost to carpet a rectangular room that is 4.5 yards wide and 15 yards long? **$337.50**

20) How many 2 in cubes can fit inside an 8 in cube? **8 cubes**

2 in

8 in