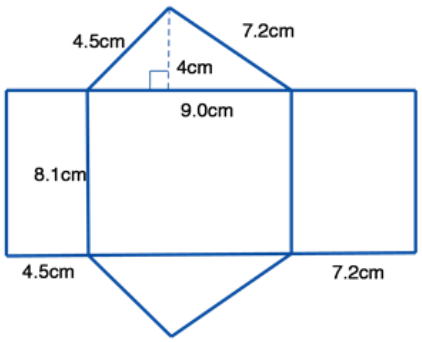
Name: _____ Date: _____

Chapter 10 Test Study Guide

For questions 1 – 6, classify the solid figure by its net. Then find the surface area of the solid figure.

1)



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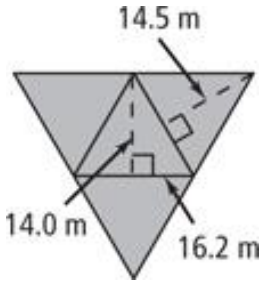
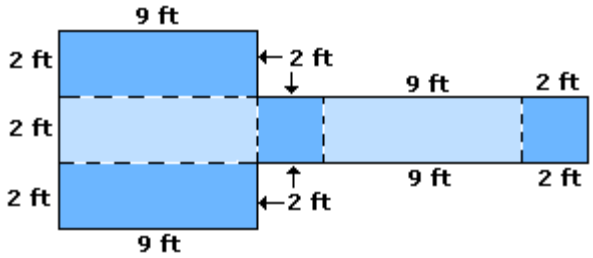


3)



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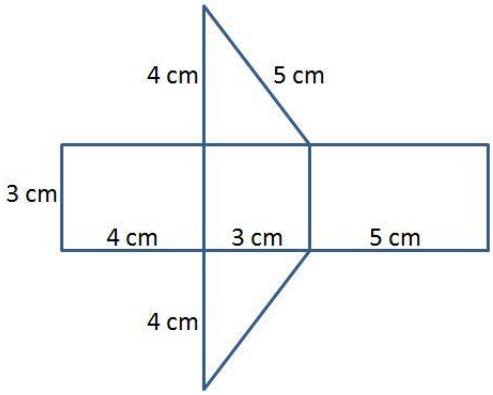

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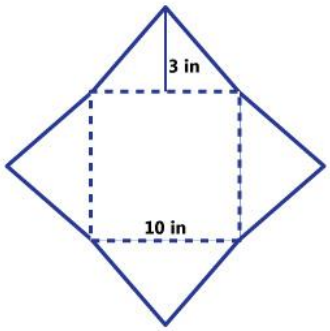
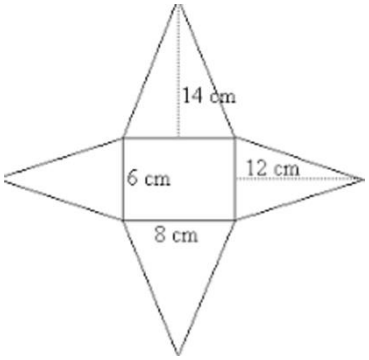
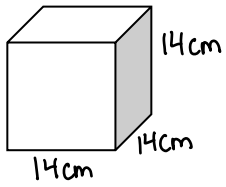


6)



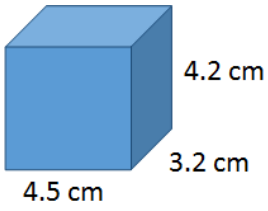
For questions 7 – 9, find the surface area and volume of each figure.

7)



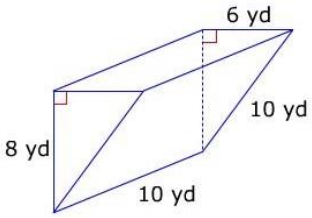
Surface Area =	**Volume =**

8)



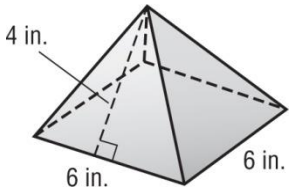
Surface Area =	**Volume =**

9)



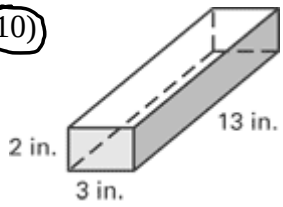
Surface Area =	**Volume =**

9) Find the surface area of the square pyramid.

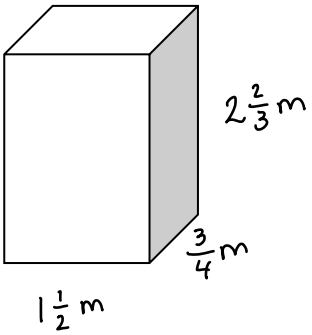


For questions 10 – 13, find the volume of each figure.

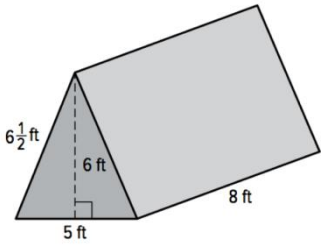
10)



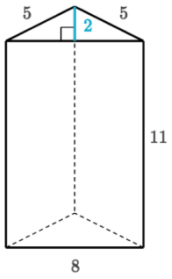
11)



12)

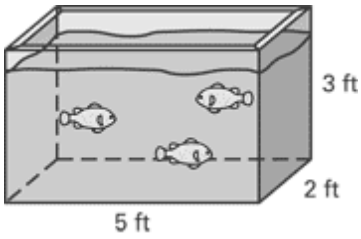


13)



For questions 14 - 15, use the diagram of the rectangular fish tank. Its sides and bottom are glass, but it is open on top.

14) You go to *Fish Fish and More Fish* to pick out fish for this fish tank. The fish expert who works there states that you need to provide a cube of water with side lengths of $\frac{1}{2}$ ft for each fish. How many fish can you purchase for the tank?

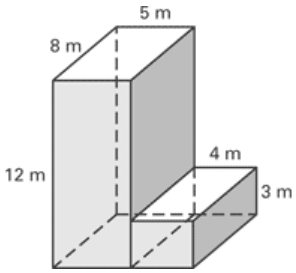


15) If the tank is filled with water to a level $\frac{1}{2}$ ft from the top of the tank, how much water is in the tank?

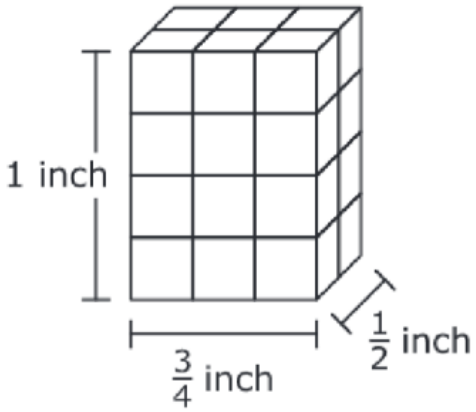
16) The volume of a rectangular prism is given. Find the missing dimension.

Volume = $15\frac{3}{4}$ m^3, $l = 4\frac{1}{2}$ in, $h = 2$ in, $w =$?

17) The solid is made up of two rectangular prisms. Find the volume of the solid.



18) Use the information provided to answer Part A and Part B.
The right rectangular prism is built with small cubes.



Part A

What is the volume, in cubic inch (es), of the right rectangular prism?

A $\frac{3}{8}$

B $\frac{2}{3}$

C $1\frac{2}{3}$

D $2\frac{1}{4}$

Part B

What is the volume, in cubic inch (es), of 1 of the small cubes?

A $\frac{1}{64}$

B $\frac{1}{16}$

C $\frac{9}{16}$

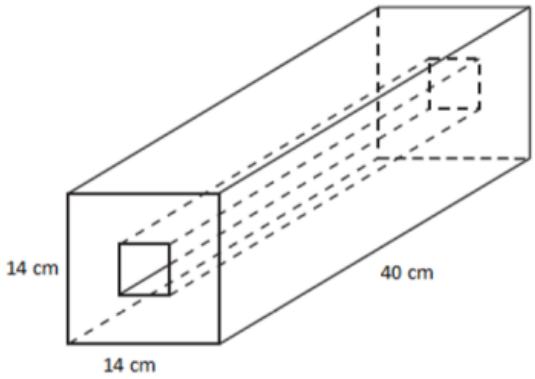
D $\frac{3}{8}$

19)

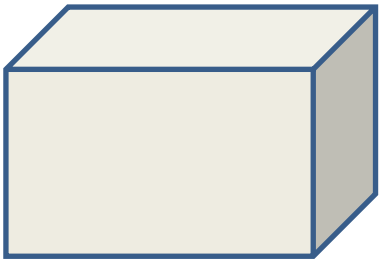
The solid is made by removing a smaller rectangular prism from a larger rectangular prism as shown below.

Both prisms have square bases.
The side length of the square base of the smaller prism is 6centimeters.
The side length of the square base of the larger prism is 14centimeters.

Find the volume of the solid.



20) A right rectangular prism is packed with identical cubes. The prism is 25 cubes long, 15 cubes wide, and 8 cubes high. If the side length of each cube is $\frac{1}{5}$ in, what is the volume, in cubic inches, of the right rectangular prism?



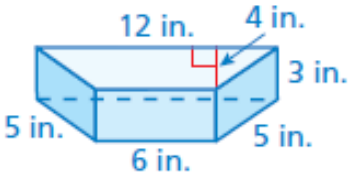
Challenge!

1) The surface area of a cube is 486 square inches. What is the length of each side of the cube?

2) A triangular prism has a volume of 1,560 cubic inches and a base of 13 inches by 15 inches. What is the height of the prism?

3) Find the volume of each figure.

A)



B)