

○ COMPLETE THE FOLLOWING 3 WORD PROBLEMS IN YOUR TEST-TAKING SECTION.

1) Dylan has a 15 foot ladder. He placed it 5 feet from the base of the house and then leaned the ladder against the house. About how far up the house does the ladder reach?

2) Sara draws a rectangle with a length of 78 inches and a width of 39 inches. She draws a diagonal line from one corner to the other. Approximately how long is the diagonal line? (Round to the nearest inch)

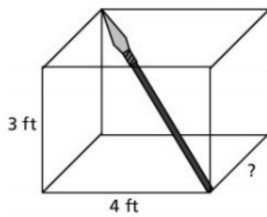
3) A rectangular television screen has a diagonal measurement of 52 inches and a width of 32 inches. What is the approximate length of the television screen?

○ GET ON MATH COMPASS LEARNING FOR TECH-TUESDAY!! USE MY.NCEDCLOUD.ORG TO LOGIN.  
Login: first intial+last name+last 4 digits of ID  
Password: YYMMDD

Pythagorean Theorem 2-D and 3-D Figures

**\*\*DRAW ALL PICTURES AND SHOW ALL WORK\*\***

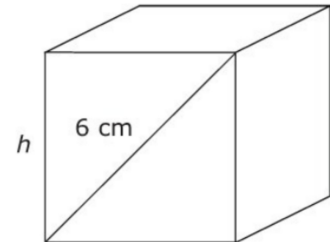
1. A spear of 5.4 ft is inserted in a wooden box as shown.



What is the approximate width of the base?

- A. 7 ft
- B. 5 ft
- C. 3 ft
- D. 2 ft

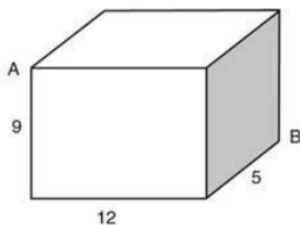
2. The diagonal of the face of a cube is 6 centimeters (cm).



What is the height,  $h$ , of the cube?

- A.  $\sqrt{6}$  cm
- B. 3 cm
- C.  $\sqrt{18}$  cm
- D. 6 cm

3. The figure is a rectangular prism.



Note: The figure is not drawn to scale.

What is the length of the diagonal from Point A to Point B?

- A. 13
- B. 15
- C.  $5\sqrt{10}$
- D.  $12\sqrt{10}$

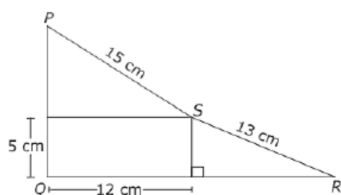
4. Linda bought a rectangular-shaped table.

- The top of the table has a width of 56 inches.
- The diagonal of the top of the table was 64 inches.

What is the **approximate** area of the top of the table?

- A. 1,736 square inches
- B. 1,984 square inches
- C. 3,584 square inches
- D. 4,762 square inches

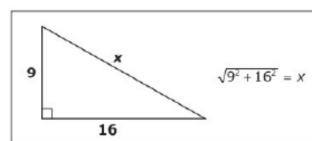
5. Figure PQRS below is made up of a rectangle and two right triangles.



What is the perimeter of figure PQRS?

- A. 78 cm
- B. 66 cm
- C. 62 cm
- D. 45 cm

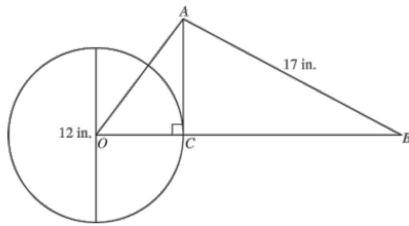
6. A student used the triangle and equation shown to find  $x$ , the missing side length.



Which equation shows the correct result of the first step?

- A.  $\sqrt{81 + 256} = x$
- B.  $\sqrt{18 + 32} = x$
- C.  $9 + 16 = x$
- D.  $\sqrt{25^2} = x$

7. Triangle  $AOC$  intersects a circle with center  $O$ . Side  $AO$  is 10 inches (in.) and the diameter of the circle is 12 in., as shown below.



What is the length of  $\overline{BC}$ ?

- A. 10 inches
- B. 14 inches
- C. 15 inches
- D. 16 inches

8. Which set of measurements could be the side lengths of a right triangle?

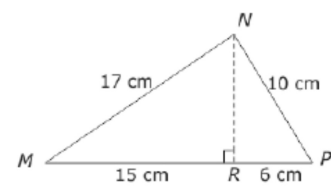
- A. {3 in., 5 in., 7 in.}
- B. {6 in., 9 in., 12 in.}
- C. {8 in., 15 in., 17 in.}
- D. {10 in., 20 in., 30 in.}

9.

The shortest side of a right triangle is 7.2 centimeters long and the longest side is 15.5 centimeters long. What is the length, to the nearest tenth of a centimeter, of the third side?

- A. 8.3 cm
- B. 11.4 cm
- C. 13.7 cm
- D. 17.1 cm

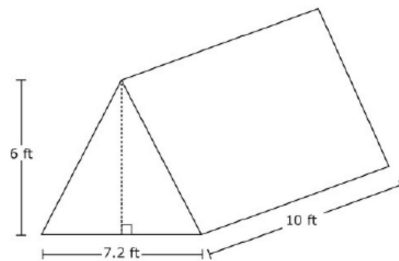
10. In the figure below is  $\triangle MNP$ .



What is the area of  $\triangle MNP$ ?

- A.  $84 \text{ cm}^2$
- B.  $105 \text{ cm}^2$
- C.  $158 \text{ cm}^2$
- D.  $168 \text{ cm}^2$

11. A tent is shaped like an isosceles triangular prism with the dimensions shown. What is the total surface area, to the nearest tenth of a square foot, of the tent, including the ground floor?



- A.  $177.2 \text{ ft}^2$
- B.  $211.2 \text{ ft}^2$
- C.  $255.1 \text{ ft}^2$
- D.  $302.6 \text{ ft}^2$