ST. LAWRENCE HIGH SCHOOL
A JESUIT CHRISTIAN MINORITY INSTITUTION

Sub: Algebra Geometry   **Class: 7**   Date: 12. 05.20
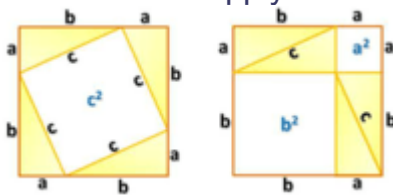**Duration: 40 min**   **Worksheet solutions -20**   **Full Marks: 15**

PYTHAGORAS THEOREM

Choose the Correct options:
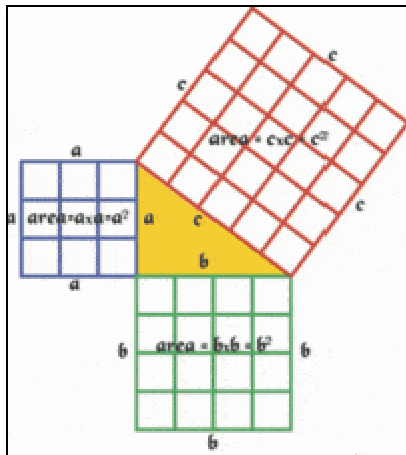
1. The legs of a right triangle are represented by a and b, and the hypotenuse of the right triangle is represented by c. Which equation represents the Pythagorean Theorem?

     a. $a^2 + b^2 = c^2$
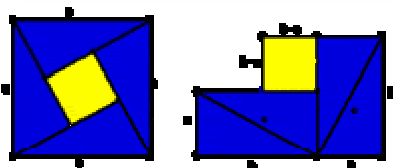   b. $a^2 + c^2 = b^2$
     c. $a + b = c$

2. Select all that apply: which is/are a proof of the Pythagorean Theorem?
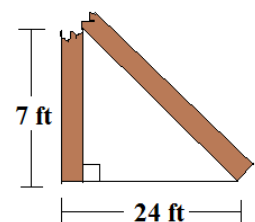
a.

b.

c.

3. The bottom of a ladder is placed 4 feet from the side of a building. The top of the ladder must be 13 feet off the ground. What is the shortest ladder that will do the job?
     a.   10 foot ladder
   b.   12 foot ladder
     c.   14 foot ladder

4. A telephone pole broke and fell down as shown. To the nearest foot what was the original height of the pole?
     a.   19 feet
     b.   25 feet
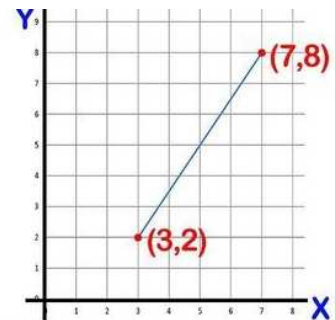   **c.   32 feet**

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5. A baseball diamond at a playground is a square with sides that measure 90 feet. About how long would a straight line be from home plate to second base? Round your answer to the nearest tenth.
   a. 180 feet
   b. 127.3 feet
   c. 16,200 feet
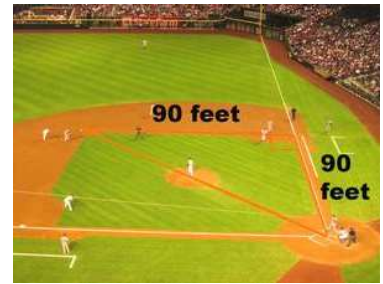
6What's the distance between the two points?
   a. 6 Units
   b. 8 units
   c. 7.2 units

7. The vertices of a triangle are A(1,2), B(3,4), and C (4,1). What is the length of the shortest side of the triangle.
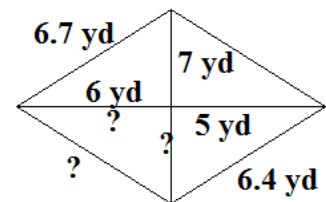   a. 3.16 units
   b. 2.8 units
   c. 4.2 units

8. Select _three_ sides lengths, in centimeters (cm), that can form a right triangle.
   a. 5 cm, 6cm, 8 cm
   **b. 6 cm, 8 cm, 10 cm**
   c. 8 cm, 5 cm, 10 cm

9. Which measurements, rounded to the nearest tenth of a yard, are the unknown lengths in the figure shown? Choose three.
   a. 4.0 yd, 5.8 yd, 7.2 yd
   b. 5.8 yd, 7.2 yd, 8.1 yd
   c. 7.2 yd, 8.1 yd. 4.0 yd

10. A kite is flying at the end of a string 500 feet long. If the kite is directly above a point 400 feet from the end of the string, how high is the kite above the ground?
   a. 400 feet
   b. 250 feet
   c. 300 feet
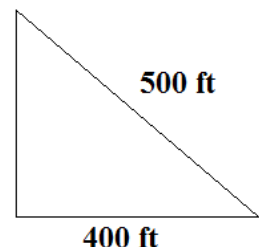
11. Which of the following set of numbers cannot be the measurements of the sides of a right triangle?

   a. 7, 21, 25.
   b. 20, 21, 29
   c. 36, 77, 85

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12. To the nearest tenth of a inch, find the lengths of a diagonal of a square whose side lengths is 8 inches.
  a. 8 inches
  b. 11.3 inches
  c. 12 inches

13. Use the Pythagorean Theorem to find the height of the triangle.
  a. 14 inches
  b. 13.26 inches
  c. 16 inches
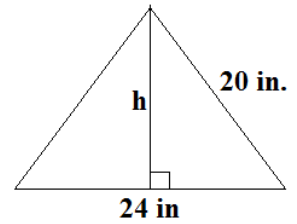
14. A cone has a slant height of 25 inches and a radius of 7 inches as shown. What is the height, h, in inches, of the cone?
  a. 24 inches
  b. 25 inches
  c. 12 inches

15. In figure value of x is
  a. 4
  b. 3
  c. 5

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