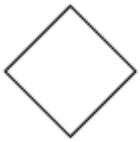
Ch 9 Pre-High School Packet

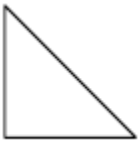
Multiple Choice **Name:** _____

Identify the choice that best completes the statement or answers the question.

____ 1. Which of the following has just one square corner?

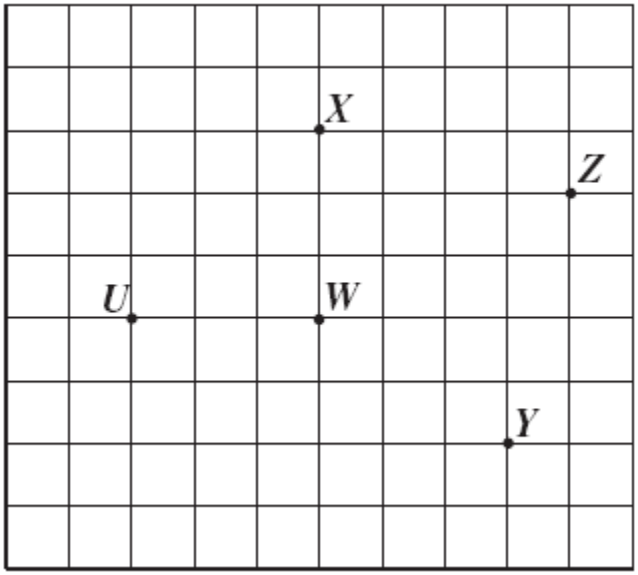
a. 

c. 

b. 

d. 

____ 2. The picture shows five points on a grid.



Which three points can be connected to form a right triangle?

a. Points U, W, and Z

b. Points W, Y, and Z

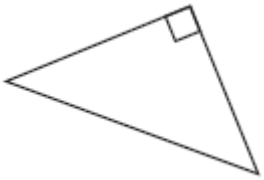
c. Points X, W, and Z

d. Points X, W, and U

____ 3. The legs of a right triangle measure 9 inches and 12 inches. What is the length of the hypotenuse of this triangle?

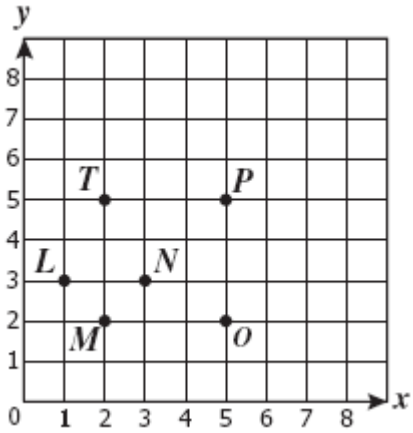
a. 3 in. b. 8 in. c. 15 in. d. 21 in.

____ 4. Which two types of angles are used to form this triangle?



a. Acute, obtuse b. Acute, right c. Obtuse, acute d. Obtuse, right

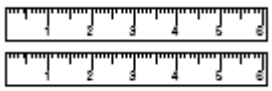
____ 5. The picture shows six points on a grid.

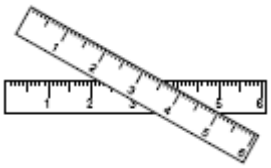


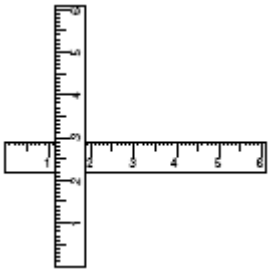
Which three points can be connected to form a right angle?

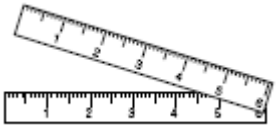
a. Points *T*, *L*, and *N*
b. Points *L*, *P*, and *T*
c. Points *N*, *O*, and *P*
d. Points *M*, *O*, and *P*

____ 6. Which pair of rulers is best described as perpendicular?

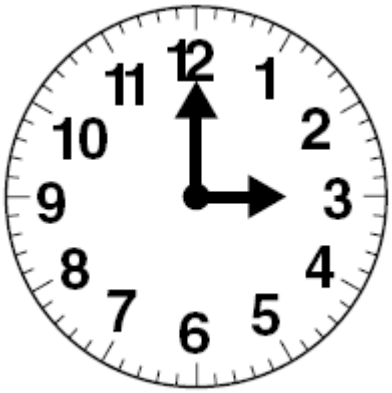
a. 

c. 

b. 

d. 

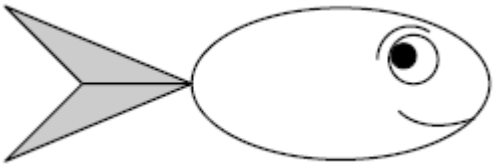
____ 7. What type of angle is formed between the hands of the clock shown below?



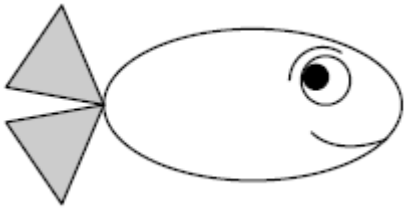
a. Right b. Acute c. Obtuse d. Straight

____ 8. Lynn drew a fish using two right triangles for its tail. Which could be the fish Lynn drew?

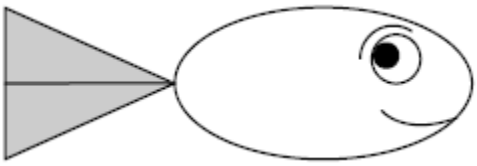
a.



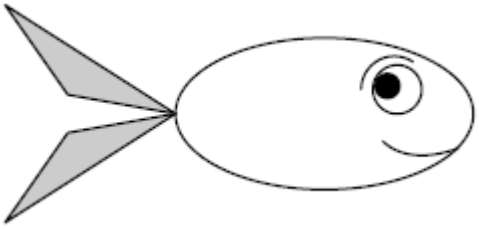
c.



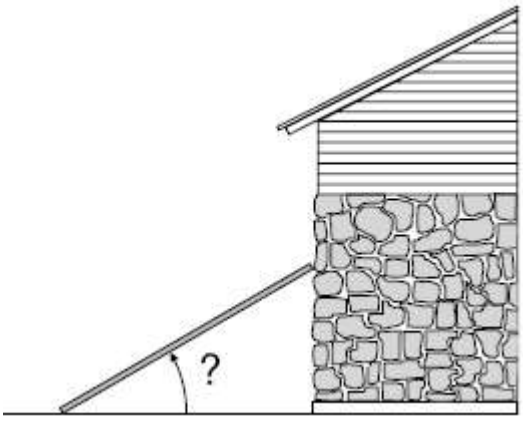
b.



d.

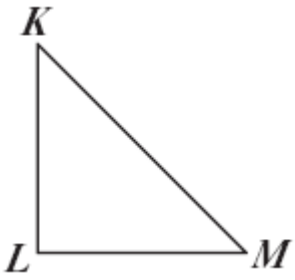


____ 9. Which is closest to the measure of the angle the board makes with the level ground as it rests against the side of the building?



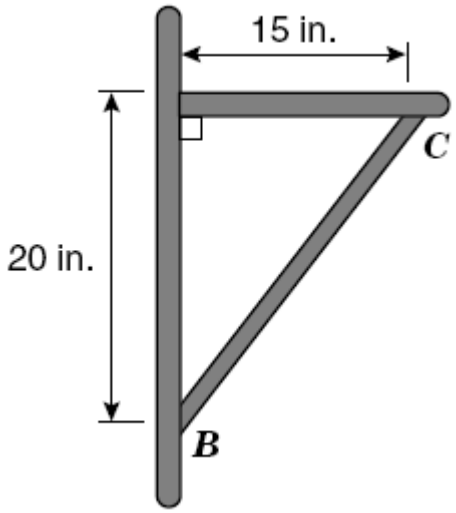
a. 30° b. 45° c. 90° d. 150°

____ 10. Which is closest to the measure of $\angle M$ in the figure shown?



a. 180° b. 90° c. 60° d. 45°

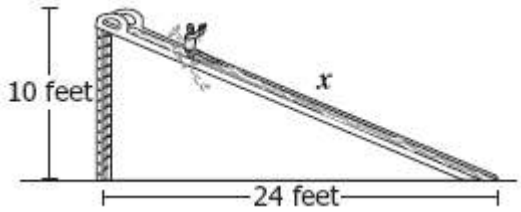
____ 11. This is a cross section of the design of a bookshelf.



Which is closest to the length, in inches, of the brace indicated by $\overline{BC}$ in the sketch?

a. 25 in. b. 30 in. c. 32.5 in. d. 35 in.

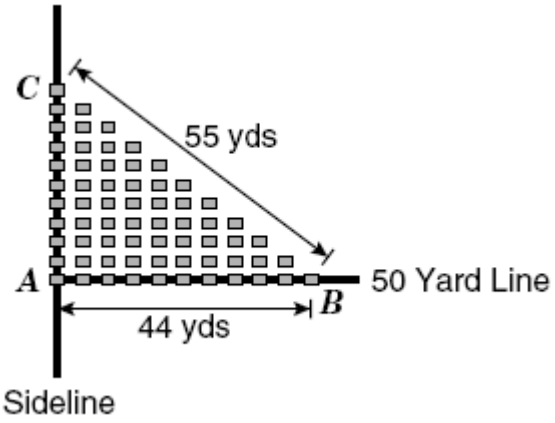
____ 12. A water slide is one side of a right triangle as shown.



What is x, the length of the water slide?

a. 14 ft b. 21 ft c. 26 ft d. 34 ft

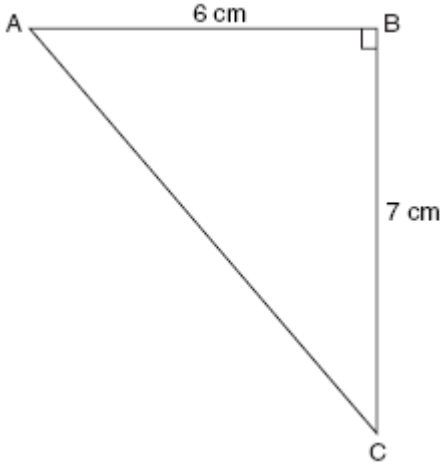
____ 13. Margo is designing a band formation for a halftime ceremony at a football game. This drawing shows where the band members will stand during the ceremony.



How many yards apart are the band members standing at points *A* and *C*?

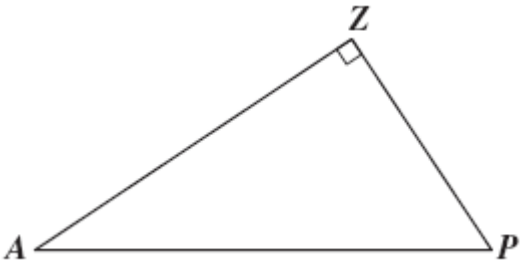
a. 11 b. 33 c. 44 d. 55

____ 14. What is the length of $\overline{AC}$?



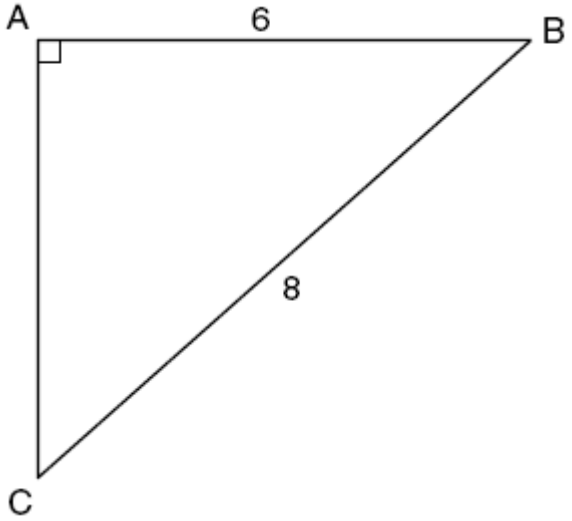
a. $\sqrt{85}$ cm b. $\sqrt{13}$ cm c. 8 cm d. 10 cm

____ 15. Which correctly names the hypotenuse of the triangle pictured?



a. ∠PZA b. ∠APZ c. $\overline{PZ}$ d. $\overline{AP}$

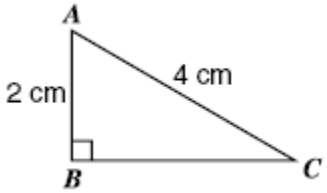
____ 16. In ΔABC, $\overline{AB}$ measures 6 centimeters and $\overline{BC}$ measures 8 centimeters.



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

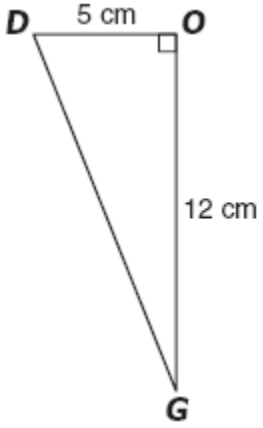
a. 1.41 cm b. 2 cm c. 5.29 cm d. 10 cm

____ 17. What is the length of $\overline{BC}$**?**



a. 2 cm b. 5 cm c. $\sqrt{12}$ cm d. $\sqrt{20}$ cm

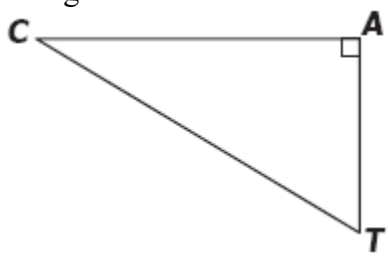
____ 18. Dale drew triangle DOG with the given measurements.



What is the measure of $\overline{DG}$?

a. 17 cm b. 13 cm c. 11 cm d. 7 cm

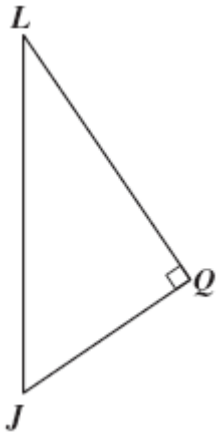
____ 19. Triangle CAT was in Cedric's mathematics book.



Which is the hypotenuse of the triangle?

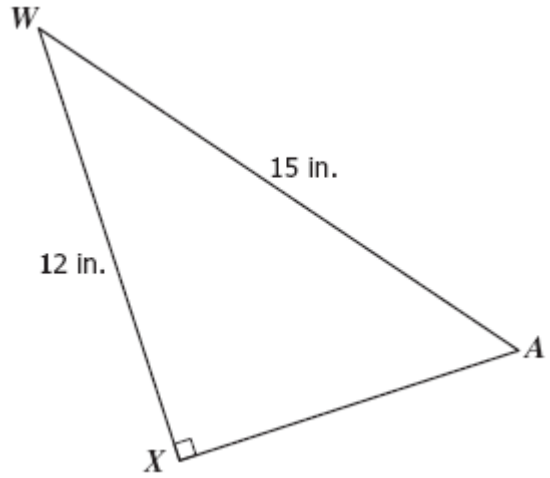
a. $\angle TAC$ b. $\overline{TA}$ c. $\angle CTA$ d. $\overline{CT}$

____ 20. Which names one of the legs of the triangle pictured?



a. $\angle LJQ$
b. $\overline{LJ}$
c. $\angle QLJ$
d. $\overline{QL}$

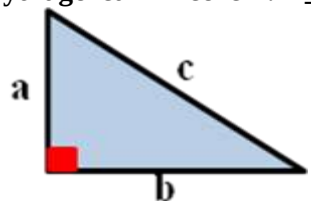
____ 21. What is the measure of $\overline{AX}$?



a. 3 in.
b. 9 in.
c. 19 in.
d. 27 in.

Ch 9 Pre-High School Packet

Pythagorean Theorem and Triangles
Pythagorean Theorem: _____ + _____ = _____



Review from chapter 6: Three numbers make a triangle if the smaller two numbers added together is _____ than the largest
Pythagorean Triples:
1) Three numbers that solve the _____ theorem
2) All _____ numbers (no _____ or _____)

Special Right Triangles (___ - ___-90 and ___-___-90)

Side opposite 30° angle is _____ the hypotenuse
Side opposite 45° angle is ½ the hypotenuse times _____
Side opposite 60° angle is ½ the hypotenuse times _____

Review from chapter 5: Classify the two special right triangles by their *sides* and their *angles* (from Chapter 5):
A) _____, _____ B) _____, _____

Geometric Mean (GM) of a, b is equal to: _____

Length Altitude = "GM of divided ___ _____"

Triangle Trigonometry
Write the definitions of the following trig functions as fractions:

Sin (angle) = ---------- Cos (angle)= ---------- Tan (angle)= ----------

Inverse Trig functions (like $\sin^{-1}$) find the measure of an _____.

Angles of Elevation and Depression
Label in the triangle where the angle in one of these types of problems <u>always</u> goes: