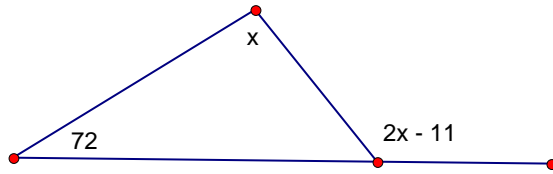
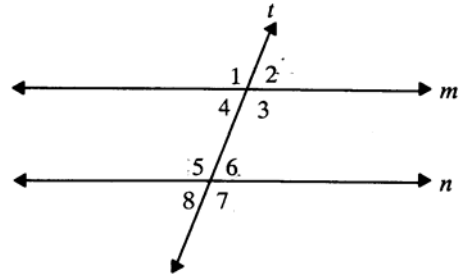


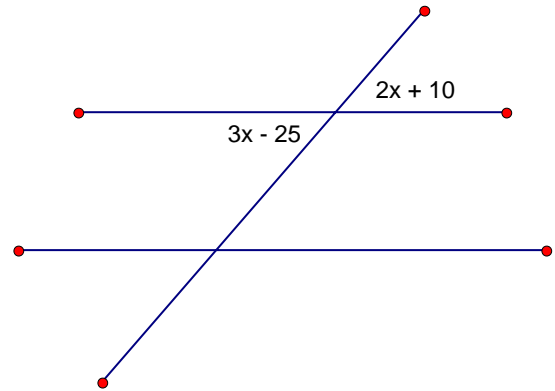
1. (5) Using the figure below, what is the value of x ? _____



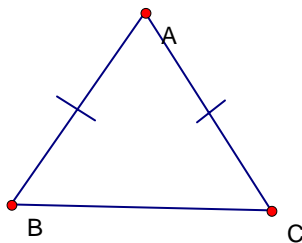
2. (5) Lines m and n are intersected by transversal t . Name the alternate interior angles.



3. (5) Given the information in the drawing shown at right, what is the measure of $\angle x$?



4. (6) ∇ABC , shown below, is an isosceles triangle. Describe each line segment.

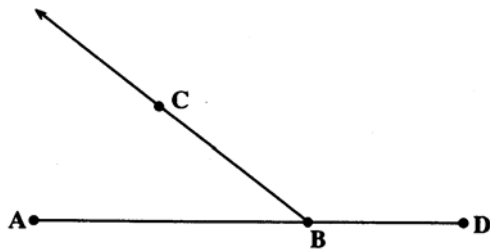


AC: _____

AB: _____

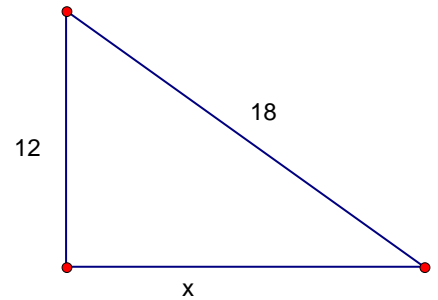
BC: _____

5. (5) If $m\angle ABC$ is 62° , what is the measure of $\angle CBD$?

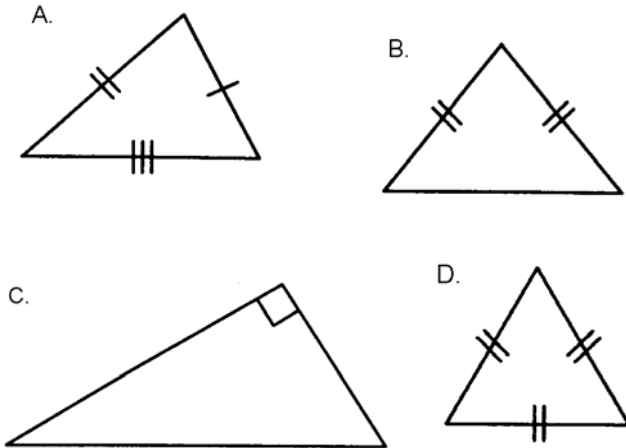


(Not drawn to scale.)

6. (5) What is the length of side x of the triangle shown at right?

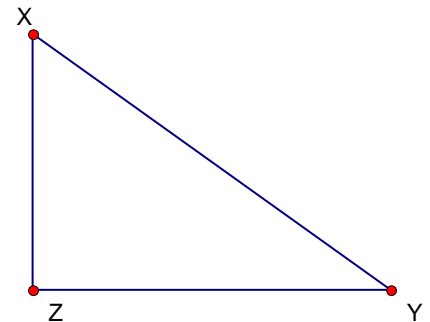


7. (5) Which of the following **cannot** be an obtuse triangle?

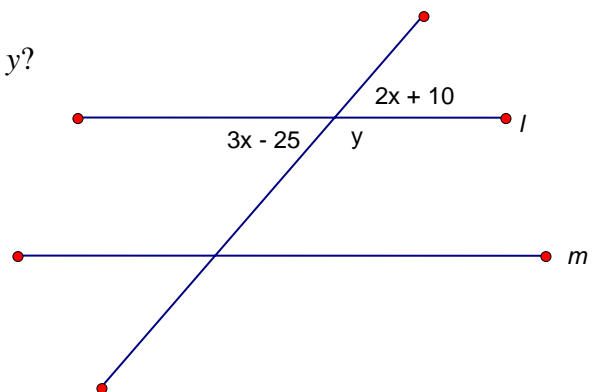


8. (2) The triangle XYZ is a right triangle and XY is the hypotenuse. Which of the following statements must be true?

- a. $XZ > ZY$
- b. $\angle Y > \angle X$
- c. $\angle Z$ may be equal to $\angle Y$
- d. $XY > ZY$



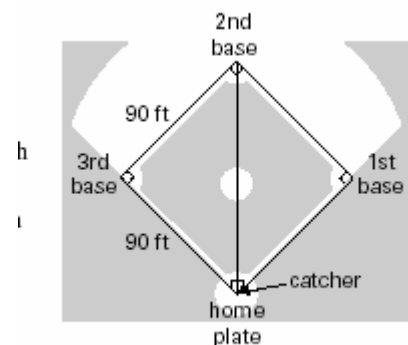
9. (5) In the diagram below, l is parallel to m . What is y ?



10. (8) A radio tower is 200 feet high and has to be supported by cables that attach to the top of the tower and the ground. If the cables attach 70 feet from the base of the tower, how long (to the nearest foot) must each cable be? (Draw a diagram to help solve this problem)

11. (3) What is the name of a triangle with the following qualities? Exactly one right angle, exactly two congruent sides.

12. (5) Based on this diagram, how far is it, to the nearest tenth of a foot, from home plate to 2nd base?



13. There is a runner on 1st base who can run a 5-second 40-yard dash. When the pitcher releases the ball for the next play, the runner starts for 2nd base. By the time the catcher catches the ball and throws it towards 2nd, the runner is halfway to 2nd base. The catcher throws the ball at 70 miles/hour.

a. (5) How fast is the runner going in feet/second? _____

b. (5) How fast is the ball going in feet/second? (There are 5280 feet in a mile) _____

c. (5) How long will it take the runner to reach 2nd base after the catcher throws the ball? _____

d. (5) How long will it take the ball to reach 2nd base? _____

e. (2) Will the runner be tagged out? _____