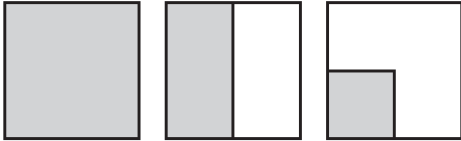


Name \_\_\_\_\_

## SEMESTER 1 EXAM REVIEW

Sketch the next figure in the pattern.

1.



2.



Write the next three numbers in the pattern.

3. 0, 1, 3, 6, ...

4. 3, 3, 6, 18, 72, ...

Give a counterexample to disprove the conjecture.

5. The value of  $x^2$  is always greater than the value of  $x$ .

Write the given statement in if-then form.

6. Band members are musicians.

7. The sum of two positive numbers is positive.

Write each of the forms of the statement, "Geometry students are good at math."

8. if-then form

9. converse

Write each of the forms of the statement, "A poet is a writer."

10. if-then form

11. converse

Use the Law of Detachment to make a valid conclusion.

12. If the light is on, then someone is home. The light is on.

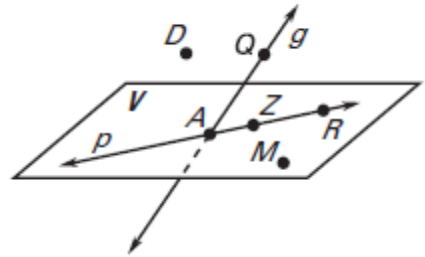
13. If you do your geometry homework, you can take the test. You have done your geometry homework.

Use the Law of Syllogism to make a valid conclusion.

14. If Celia practices all week, she can play in Saturday's soccer game. If Celia plays in Saturday's game, the team will win.

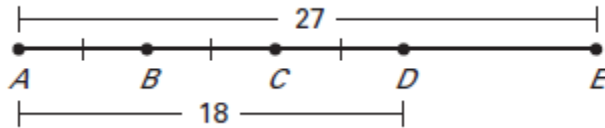
## Unit 2. Points, Lines, Planes

Use the diagram to answer the following questions.



15. Find three points that are collinear.
16. Write three different names for line  $p$ .
17. Name a point not coplanar with  $M$ ,  $R$ , and  $Z$ .
18. What is the intersection of  $\overleftrightarrow{AQ}$  and  $\overleftrightarrow{ZR}$ ?

Find the indicated length.



19.  $DE$

20.  $AB$

Find the exact distance between the two points by using the distance formula.

20.  $A(2, 3)$  and  $B(5, -1)$

21.  $C(4, -7)$  and  $D(-8, -2)$

22. If  $AC = 56$  and  $B$  is the midpoint of  $AC$ , what is  $AB$ ?

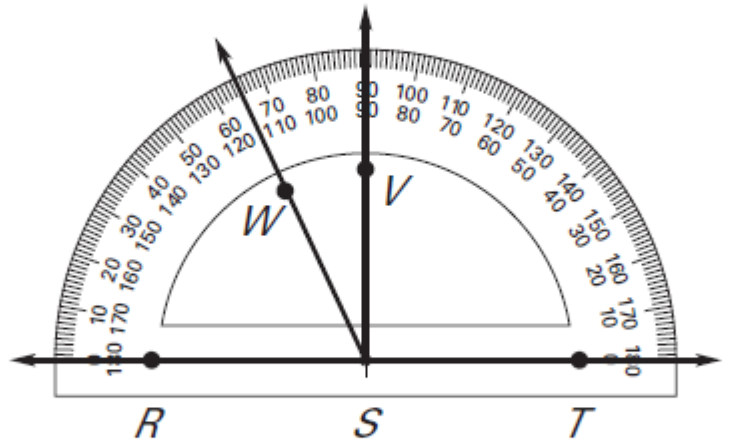
23. If B is between A and C. If  $AB = 8x + 9$ ,  $BC = 6x + 5$ , and  $AC = 98$ , what is BC?

**Unit 3: Angles**

Use the diagram to find the measure of the indicated angle. Then classify the angle.

24.  $\angle WSR$

25.  $\angle TSW$



$\angle 1$  and  $\angle 2$  are complementary angles. Given the measure of  $\angle 1$ , find  $m\angle 2$ .

26.  $m\angle 1 = 22^\circ$

27.  $m\angle 1 = 89^\circ$

$\angle 3$  and  $\angle 4$  are supplementary angles. Given the measure of  $\angle 3$ , find  $m\angle 4$ .

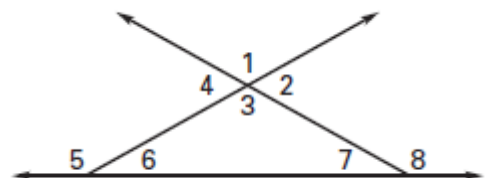
28.  $m\angle 3 = 14^\circ$

29.  $m\angle 3 = 100^\circ$

Use the diagram to tell whether the angles are vertical angles, a linear pair, or neither.

30.  $\angle 1$  and  $\angle 2$

31.  $\angle 2$  and  $\angle 4$



Use the diagram to list all pairs of the defined angles.

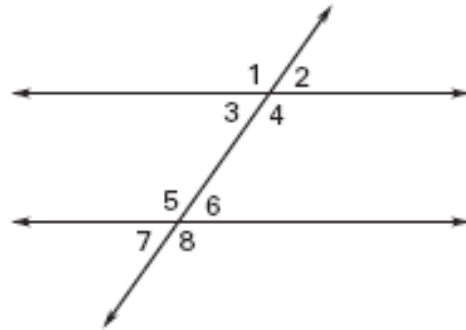
32. Vertical angles

33. Corresponding angles

34. Alternate Interior angles

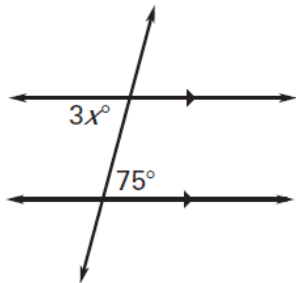
35. Consecutive Interior angles

36. Alternate Exterior angles

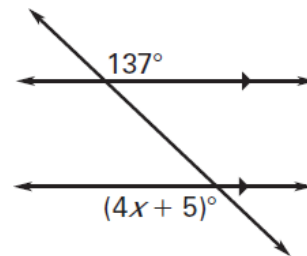


Find the value of  $x$ .

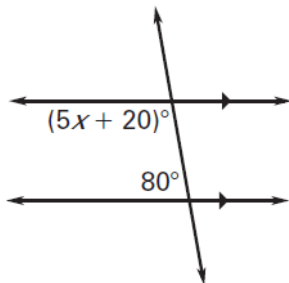
37.



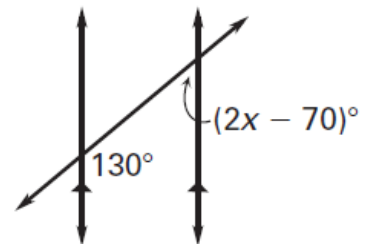
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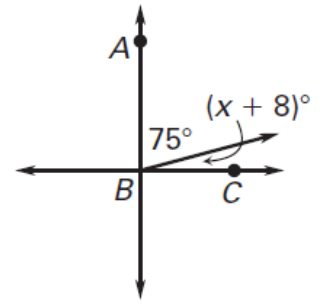
39.



40.

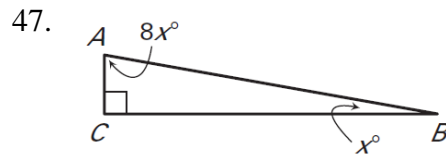
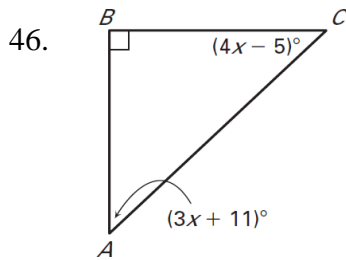
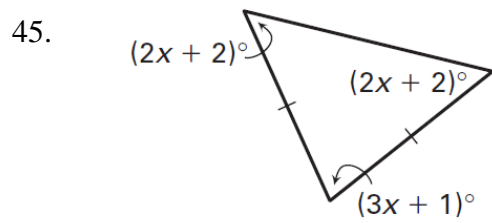
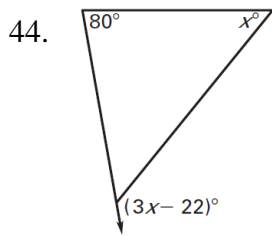
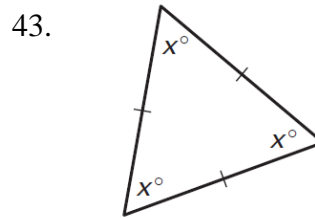
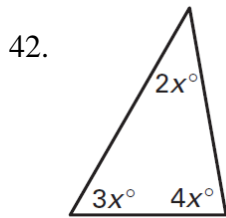


41. In the diagram,  $\overrightarrow{AB} \perp \overrightarrow{BC}$ . Find the value of  $x$ .

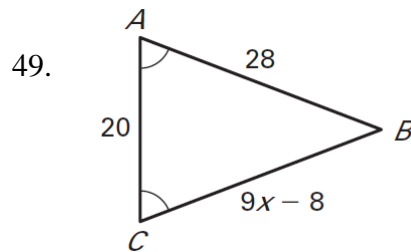
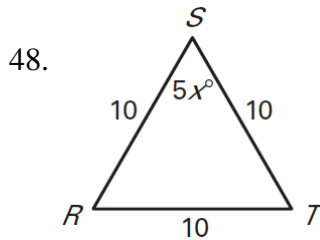


**Unit 4: Triangles**

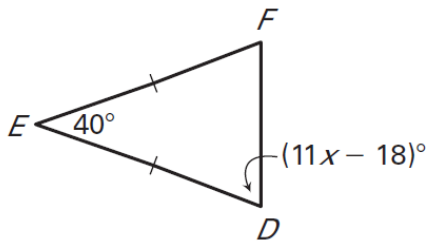
Find the value of  $x$ . Then classify the triangle by its angles.



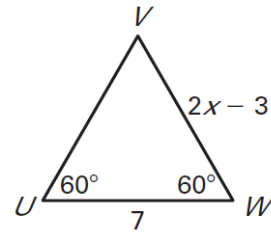
Find the value of  $x$ .



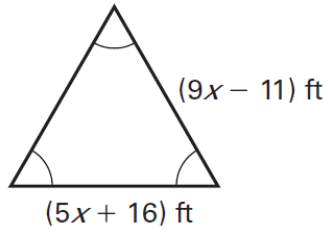
50.



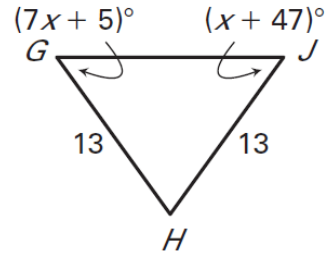
51.



52.

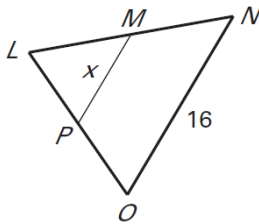


53.

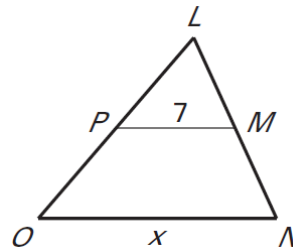


$\overline{MP}$  is a midsegment of  $\triangle LNO$ . Find the value of  $x$ .

54.

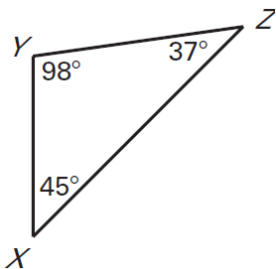


55.

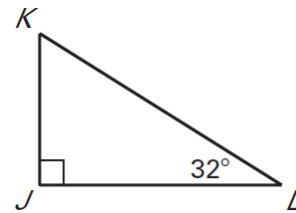


List the unknown sides in order from least to greatest.

56.

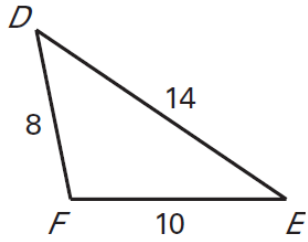


57.

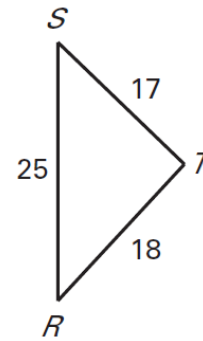


List the unknown angles in order from least to greatest.

58.

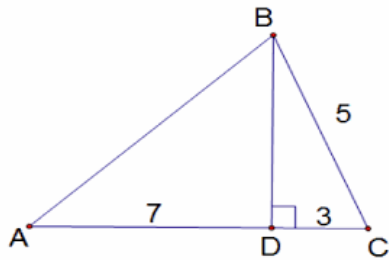


59.



60. Is it possible to create a triangle with the following lengths? 8 in., 12 in., 6 in

61. Solve for  $AB$  by using the Pythagorean Theorem.



**TRIG!!!**