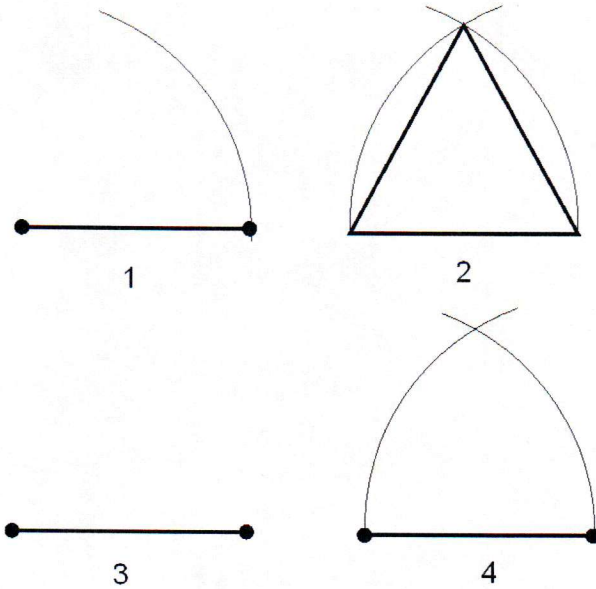


Geometry Bundle 5 Test Review

1. Below are steps used in constructing an equilateral triangle. Put them in order.



3, 1, 4, 2

2. The lengths of two sides of a triangle are 8 cm and 12 cm. Find the range of possible lengths for the third side.

$12 + 8 = 20$

$12 - 8 = 4$

4 < x < 20

3. Identify which lengths do not form a triangle.

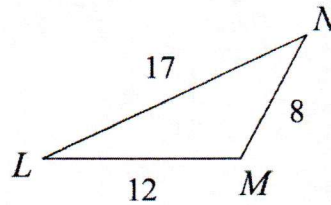
8, 8, 16 $8 + 8 = 16 > 16$ no

8, 18, 8

$8 + 18 = 26 > 8$ yes

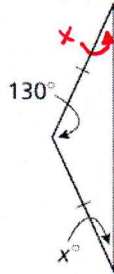
$8 + 8 = 16 > 18$ no

4. List the angles in order from smallest to largest.



$\angle L, \angle N, \angle M$

5. Solve for x. (G.6D)

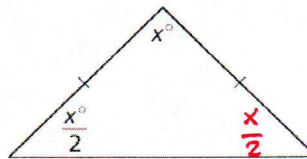


180
 $- 130$
 $\hline 50$

$50 \div 2 = 25$

$x = 25^\circ$

6. Solve for x. (G.6D)



$x + \frac{x}{2} + \frac{x}{2} = 180$

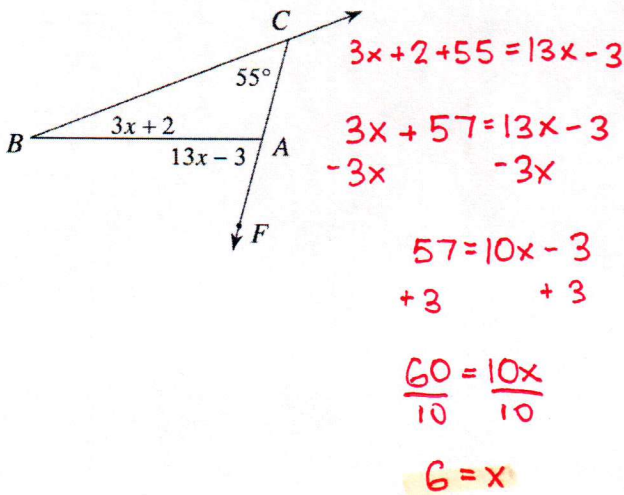
$x + \frac{1}{2}x + \frac{1}{2}x = 180$

$x + x = 180$

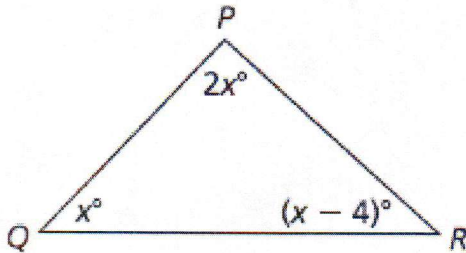
$\frac{2x}{2} = \frac{180}{2}$

$x = 90$

7. Solve for x. (G.6D)

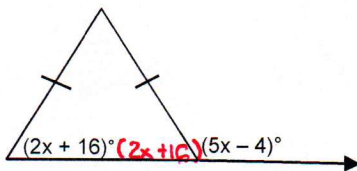


8. List the sides in order from shortest to longest.



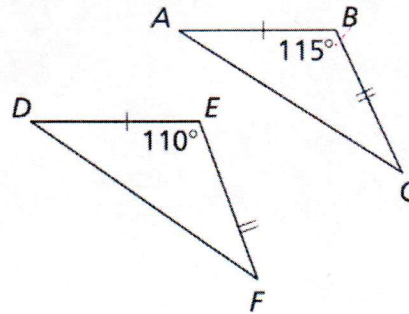
$\angle R, \angle Q, \angle P$
 $\overline{QP}, \overline{PR}, \overline{QR}$

9. Find the value of x.



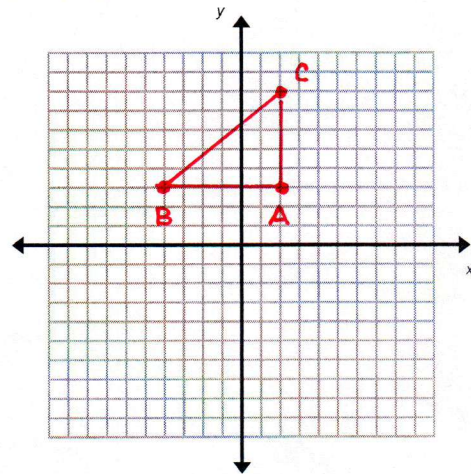
$2x + 16 + 5x - 4 = 180$
 $7x + 16 - 4 = 180$
 $7x + 12 = 180$
 $-12 \quad -12$
 $\frac{7x}{7} = \frac{168}{7}$
 $x = 24$

10. If $m\angle E > m\angle B$, what can you conclude about the lengths of the sides?



$AC > DF$

11. Classify $\triangle ABC$ with vertices A (2, 3), B (-4, 3), C (2, 8) by its sides.



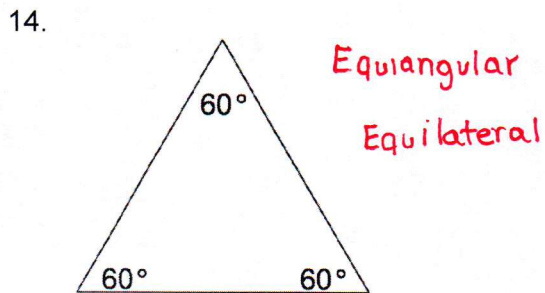
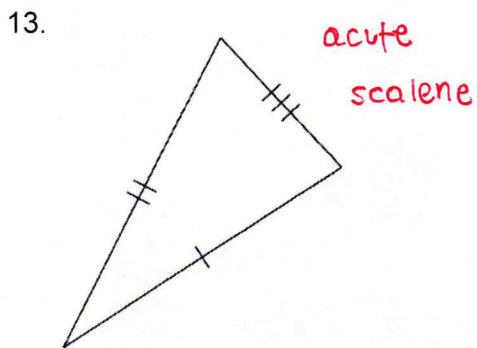
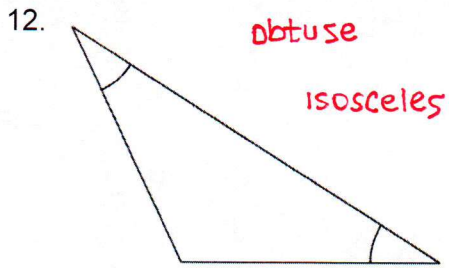
$AB = \sqrt{(-4-2)^2 + (3-3)^2} = \sqrt{-6^2 + 0^2} = \sqrt{36} = 6$

$BC = \sqrt{(2--4)^2 + (8-3)^2} = \sqrt{6^2 + 5^2} = \sqrt{61}$

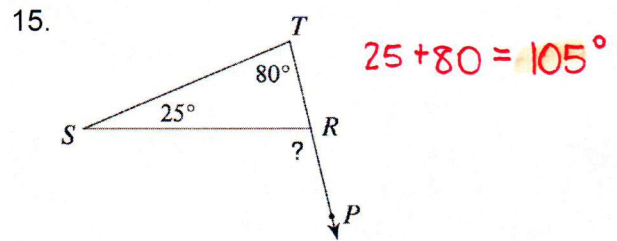
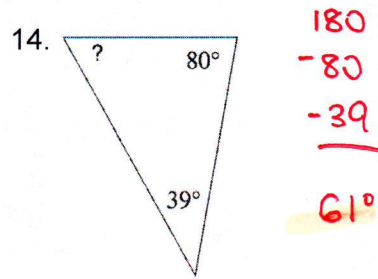
$AC = \sqrt{(2-2)^2 + (8-3)^2} = \sqrt{0^2 + 5^2} = \sqrt{25} = 5$

All sides are different so scalene

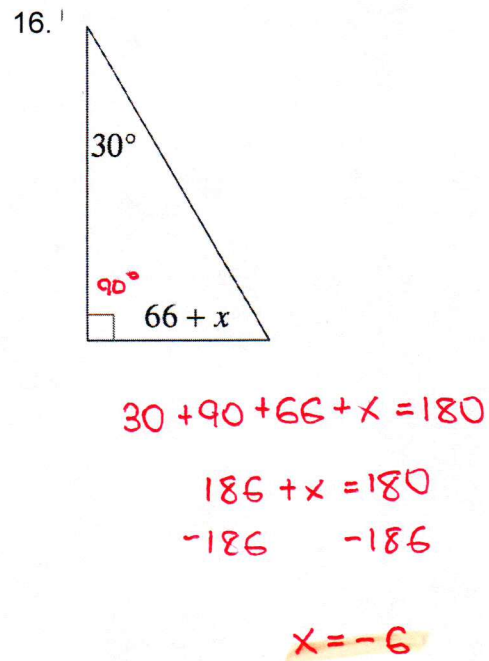
For 12-14, classify each triangle by its angle and sides.



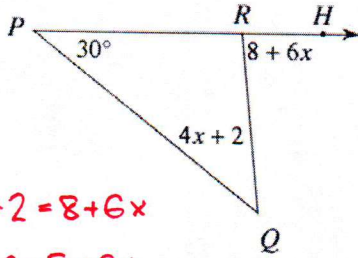
For 14 and 15, find the measure of each angle indicated.



For 16 and 17, find x.



17.



$$30 + 4x + 2 = 8 + 6x$$

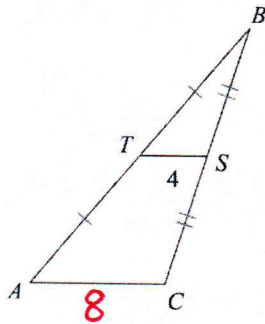
$$\begin{array}{r} 4x + 32 = 8 + 6x \\ -4x \quad -4x \end{array}$$

$$\begin{array}{r} 32 = 8 + 2x \\ -8 \quad -8 \end{array}$$

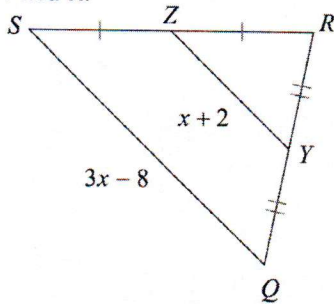
$$\frac{24}{2} = \frac{2x}{2}$$

$$12 = x$$

18. Find AC



19. Find x.



$$2(x + 2) = 3x - 8$$

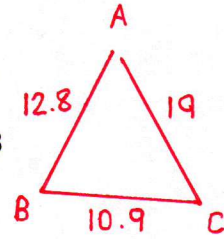
$$\begin{array}{r} 2x + 4 = 3x - 8 \\ -2x \quad -2x \end{array}$$

$$\begin{array}{r} 4 = x - 8 \\ +8 \quad +8 \end{array}$$

$$12 = x$$

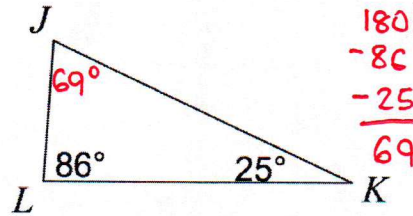
20. Order the angles from smallest to largest.

In $\triangle ABC$
 $BC = 10.9$
 $AC = 19$
 $AB = 12.8$



$\angle A, \angle C, \angle B$

21. Order the sides from shortest to longest.



$$\begin{array}{r} 180 \\ -86 \\ \hline 94 \\ -25 \\ \hline 69 \end{array}$$

$\overline{JK}, \overline{LK}, \overline{JL}$

22. Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

6, 8

$$8 + 6 = 14$$

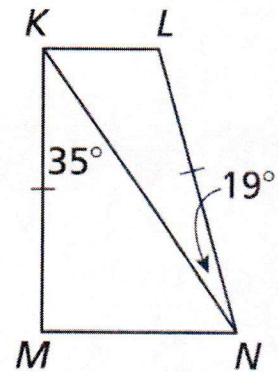
$$8 - 6 = 2$$

$$2 < x < 14$$

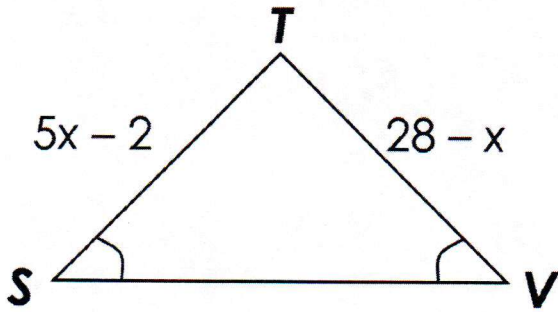
23. Complete the statement with $>$, $<$, or $=$.

$$KL > MN$$

$$35^\circ > 19^\circ$$



24. Find x.



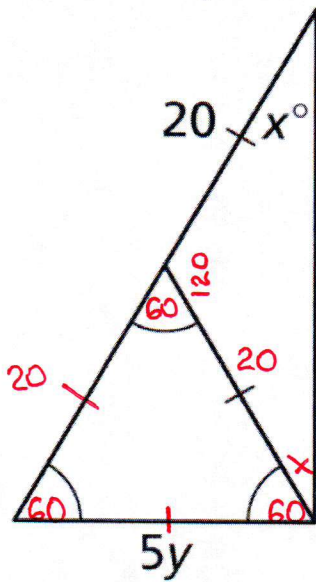
$$\begin{array}{r} 5x - 2 = 28 - x \\ + x \qquad \qquad + x \end{array}$$

$$\begin{array}{r} 6x - 2 = 28 \\ + 2 \quad + 2 \end{array}$$

$$\frac{6x}{6} = \frac{30}{6}$$

$$x = 5$$

25. Find x and y.



$$\begin{array}{r} 180 \\ - 60 \\ \hline 120 \end{array}$$

$$\begin{array}{r} 180 \\ - 120 \\ \hline 60 \end{array}$$

$$60 \div 2 = 30$$

$$x = 30$$

$$\frac{5y}{5} = \frac{20}{5}$$

$$y = 4$$