

$$2(2x + 1) = 4x + 2$$

3. median = BE  
 altitude = DE  
 $\angle$  bisector = CF

4. perpendicular bisector

5.  $AB \cong AC$

6. isosceles triangle;  $AC \cong CB$

*if a point lies on the perpendicular bisector of a segment, then the point is equidistant from the endpoints of the segment.*

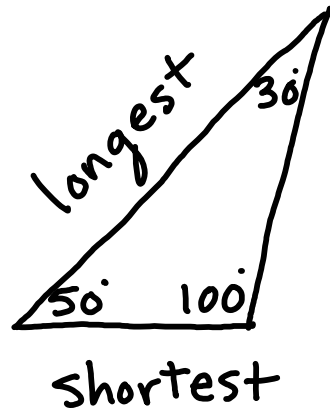
7. *the sum of the lengths of any two sides of a triangle is greater than the length of the third side.*

8. *if one side of a triangle is longer than a second side, then the angle opposite the first side is larger than the angle opposite the second*

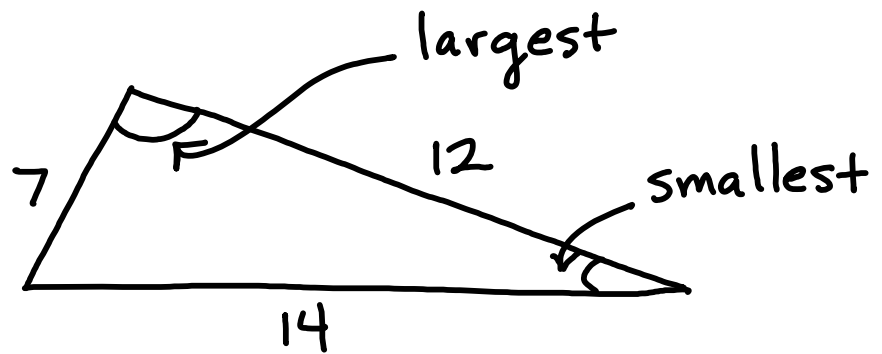
9. Yes,  $5 + 9 > 7$  Triangle Inequality  
 $5 + 7 > 9$   
 $9 + 7 > 5$

10. No,  $6 + 18 > 10$   
 $6 + 10 \not> 18$  16 is not greater than 18  
Fails Triangle Inequality

11.



12.



13. scalene

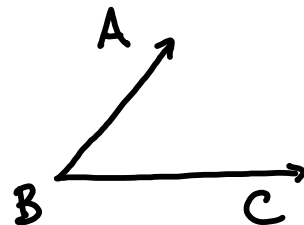
14.  $x = 18.1$

$$\begin{aligned}
 2x + (3x + 1) + (5x - 2) &= 180 \\
 10x - 1 &= 180 \\
 10x &= 181 \\
 x &= 18.1
 \end{aligned}$$

15.  $60^\circ$

16. B

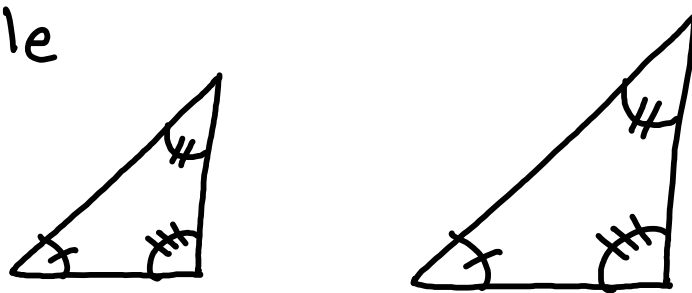
$\angle ABC$   
 $\uparrow$   
 vertex



17. No,  $91^\circ + 91^\circ = 182^\circ$   
     $\swarrow \quad \nearrow$   
    two smallest obtuse angles  
    add up to more than  $180^\circ$ .

18. No one can not assume the sides are  $\cong$ .

example



$\swarrow \quad \nearrow$   
equal angles  
different sides

19.  $180^\circ$

20. True