*10 questions *Calculator and notes allowed *Show all work/steps- use separate paper *Recommend time frame 15min -20min

Provide complete explanations in your responses.

Medians, Altitudes and Bisectors

1. True or False: a triangle can have more than one altitude

   a. True

   b. False

2. An angle is bisected into two equal angles that measure $(5x + 3)°$. What is the measure of the bisected angle in terms of x?

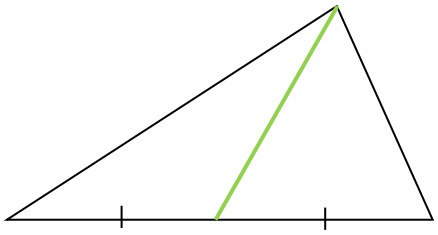
a. $(\frac{5}{2}x + \frac{3}{2})°$

b. $(15x)°$

c. $(5x - 3)°$

d. $(10x + 6)°$

3. In the triangle below the green line is a:



a. Median

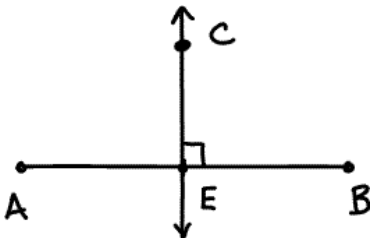
b. Altitude

c. Angle Bisector

d. Leg

Bisector Theorems

4. What type of triangle if formed by points ACB if $AE \cong EB$?



a. Equilateral

b. Isosceles

c. Right

d. Scalene

Triangle Inequalities

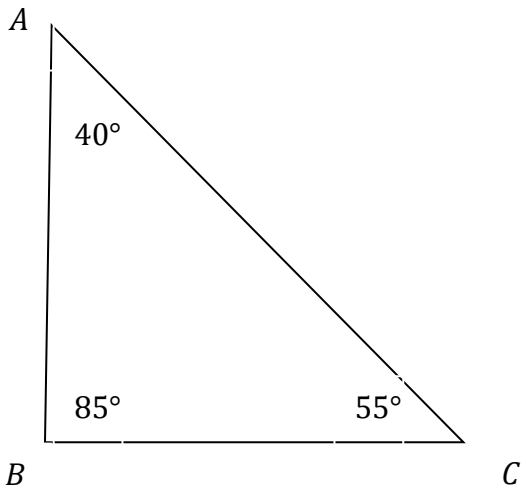
5. Can a triangle be formed by three sides that measure 5, 9, and 7?

   a. Yes

   b. No

   c. Not enough information to determine

6. Identify the longest and shortest side of the triangle.



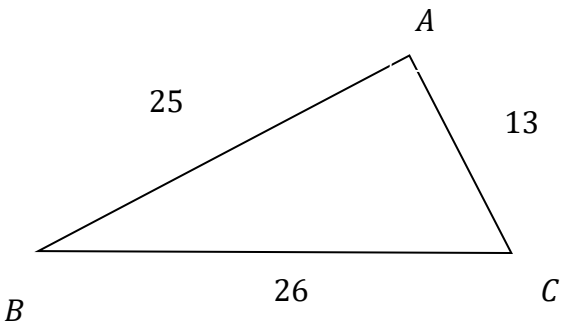
   a. $Longest\ Side\colon\ AC\quad Shortest\ Side\colon\ BC$

   b. $Longest\ Side\colon\ AB\quad Shortest\ Side\colon\ CA$

   c. $Longest\ Side\colon\ BC\quad Shortest\ Side\colon\ AB$

   d. $Longest\ Side\colon\ AB\quad Shortest\ Side\colon\ CB$

7. Identify the largest and smallest angle in the triangle.



a. $Largest\ Angle$: $\angle ABC$ $Smallest\ Angle$: $\angle BAC$

b. $Largest\ Angle$: $\angle BAC$ $Smallest\ Angle$: $\angle ABC$

c. $Largest\ Angle$: $\angle ACB$ $Smallest\ Angle$: $\angle CAB$

Triangles and Angles

8. The angles of a triangle are $3x,\ (4x+1) and\ (6x-3)$, find the value of x.

a. $x = 9.2$

b. $x = 12$

c. $x = 14$

d. x =13.6

9. What is the angle measure of each angle in a scalene triangle?

a. 60°

b. 45°

c. 30°

d. *all the angles are different and add up to* 180°

10. What is the vertex of $\angle EFG$?

a. E

b. F

c. G

d. *none of the above*