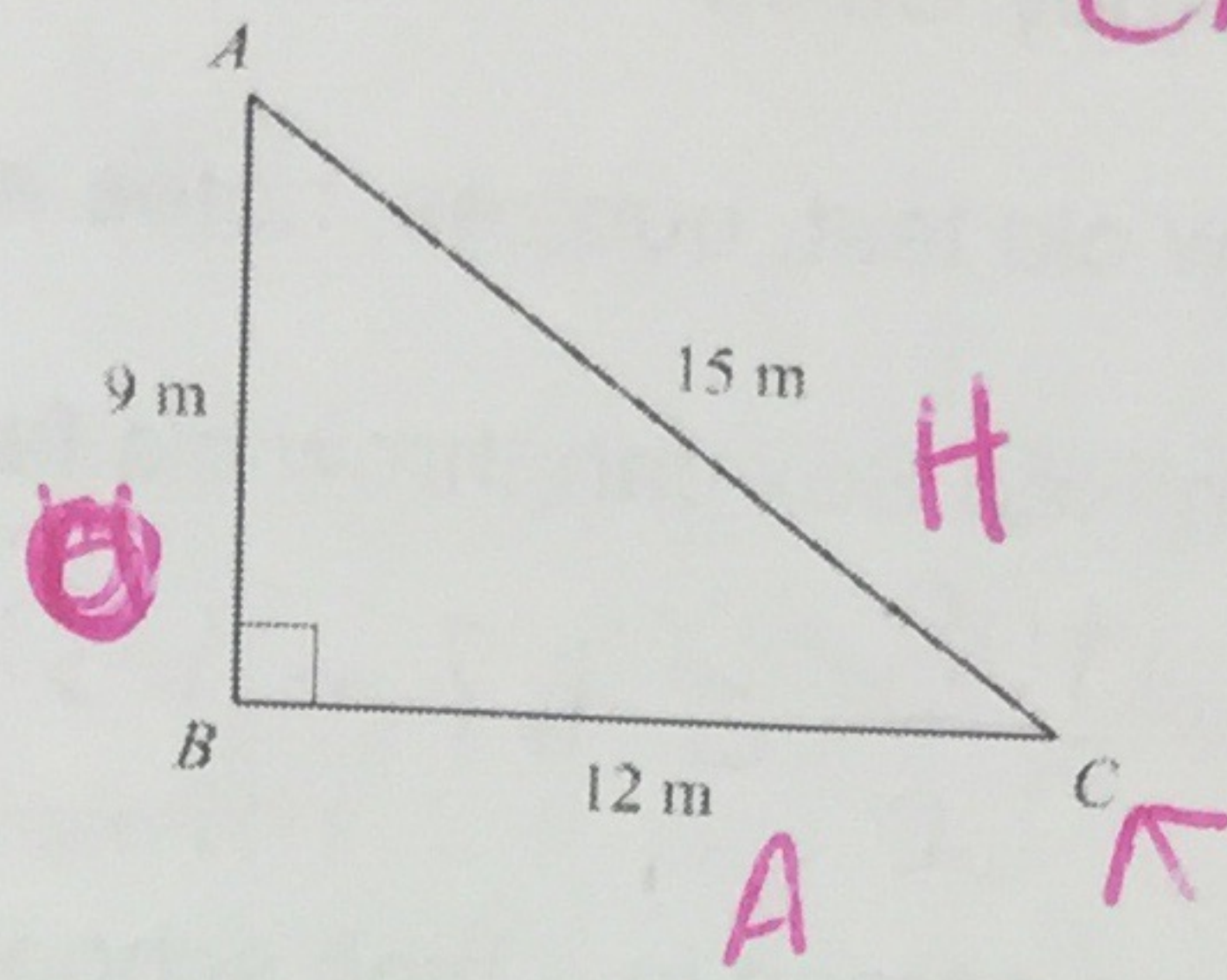




8. Triangle ABC is shown. What is the value of  $\cos A$ ?

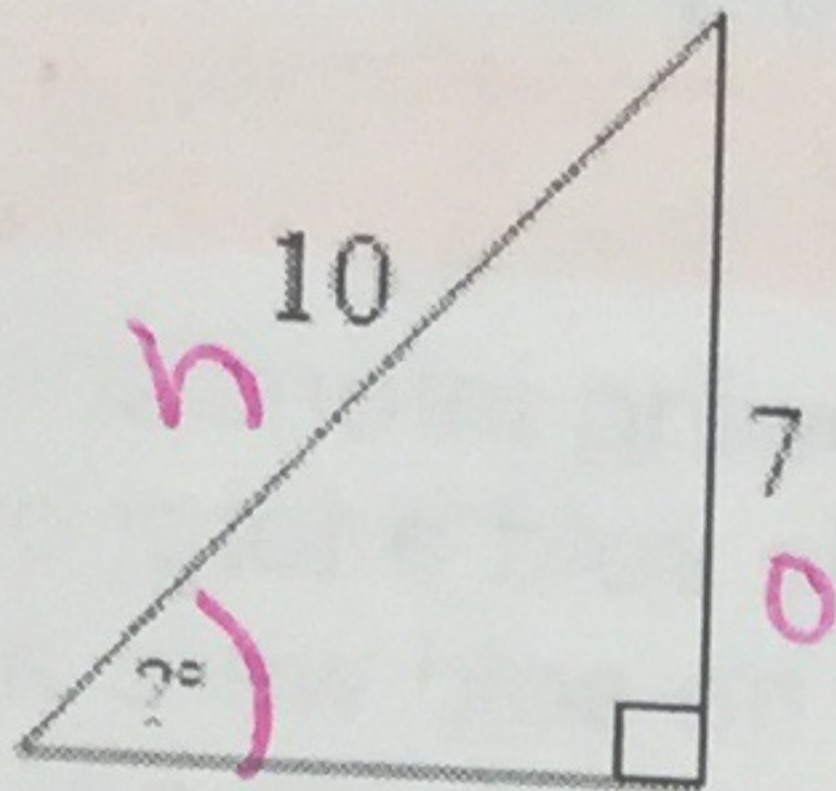
- A.  $\frac{3}{5}$
- B.  $\frac{3}{4}$
- C.  $\frac{4}{5}$
- D.  $\frac{5}{3}$



CAH

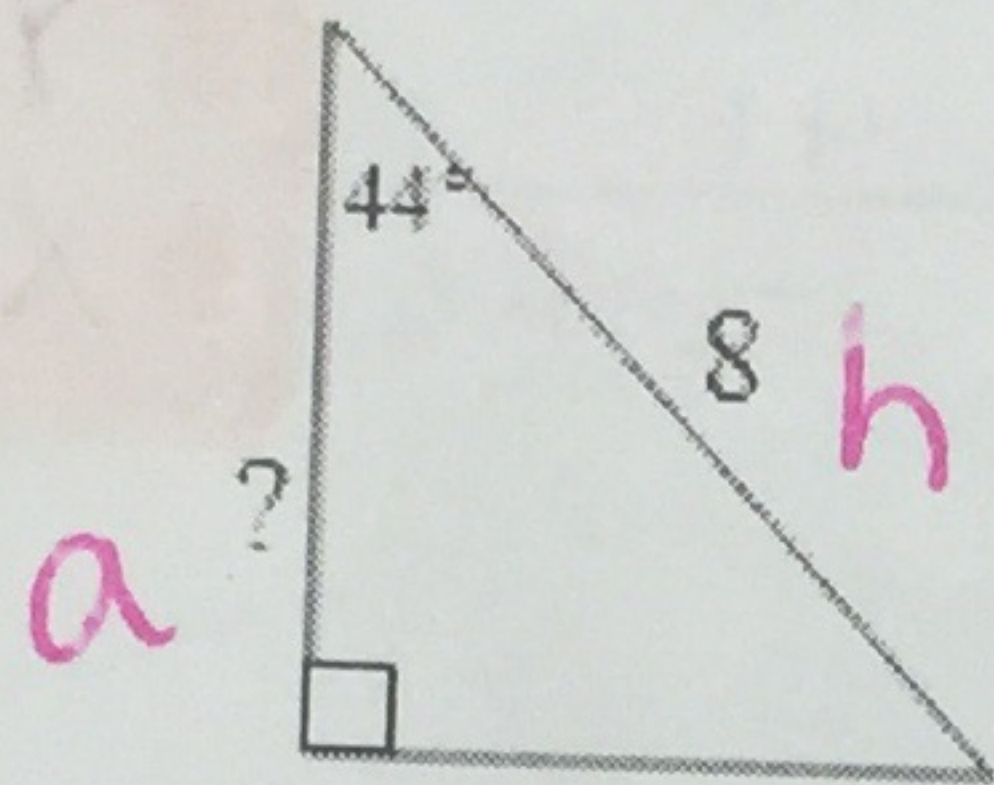
$$\frac{12}{15} = \frac{4}{5}$$

9. Find the measure of the angle.



$$\sin^{-1}\left(\frac{7}{10}\right) = 44^\circ$$

10. Find the unknown side length.



$$\cos(44) = \frac{x}{8} = 5.75$$

11. Determine if the lengths can be sides of a triangle. If so, is the triangle acute, obtuse or right?  
8 inches, 9 inches, 11 inches

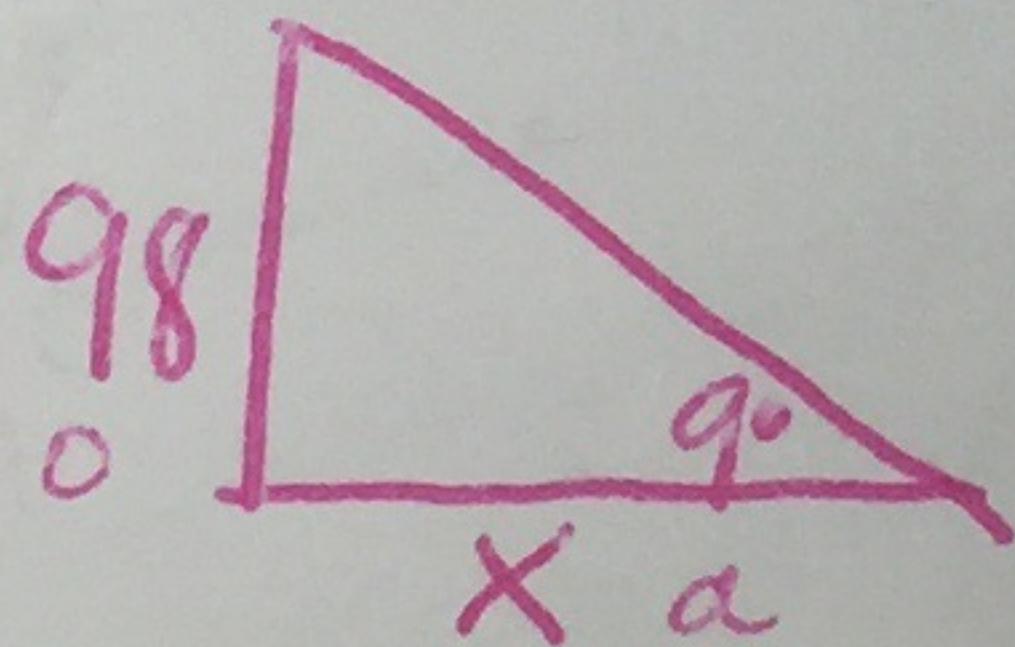
$$8^2 + 9^2 \square 11^2$$

$$64 + 81 > 121 \quad \text{acute}$$

12. Point  $P'(-6, -4)$  is the image of point  $P(-2, 3)$  under translation  $T$ . What is the image of  $(5, -1)$  under the same translation.

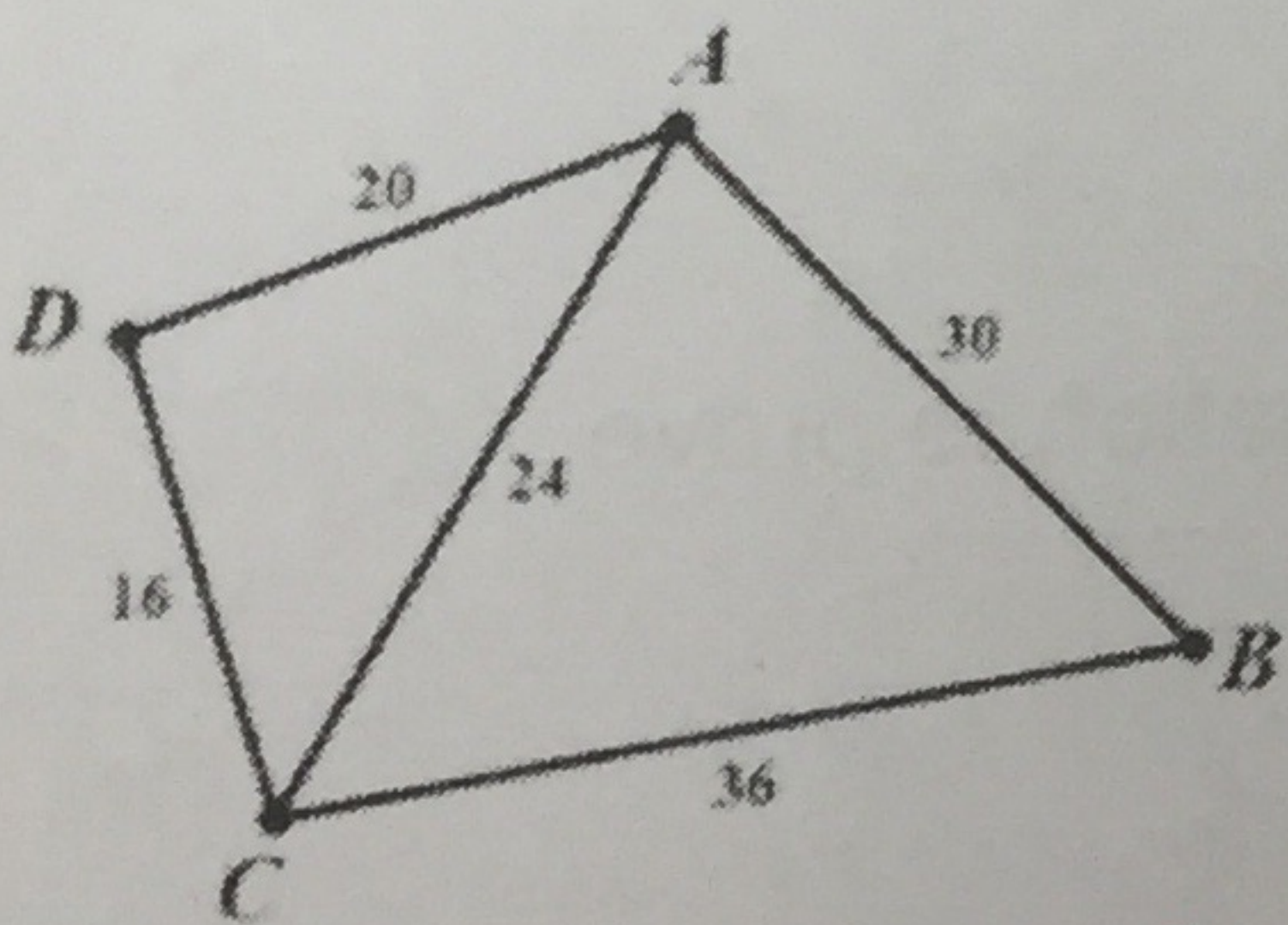
$$(4, 7) \quad \text{so } (5, -1) \rightarrow 9, 6$$

13. A ship has been sighted from a lighthouse. The observer is 98 feet above the ground (sea level) when he sighted the ship and at  $9^\circ$  angle of depression. Determine how far the ship is away from the lighthouse.



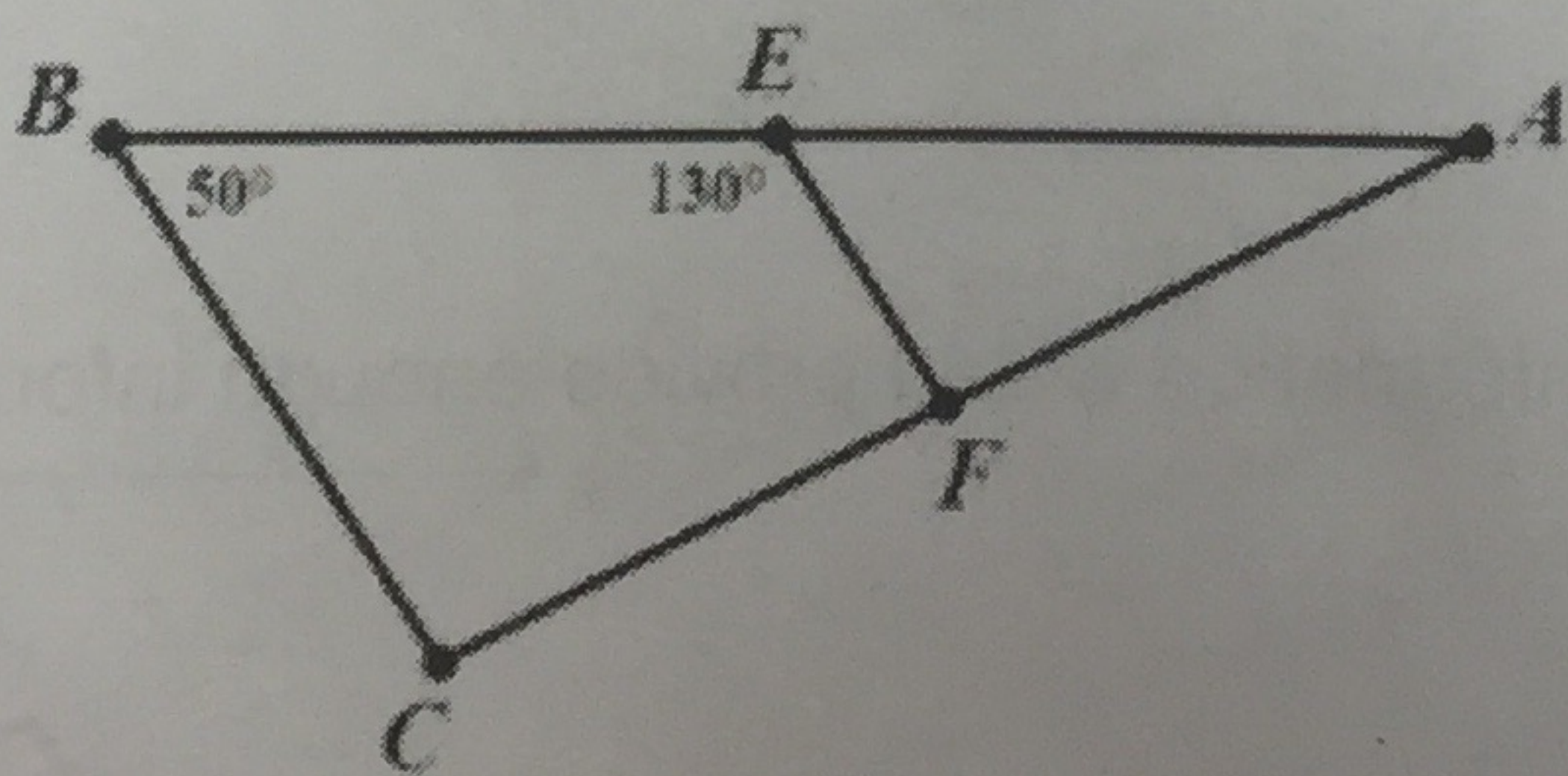
$$\tan(9) = \frac{98}{x} = 618.75$$

14. Determine if the triangles are similar. If so, justify your answer.

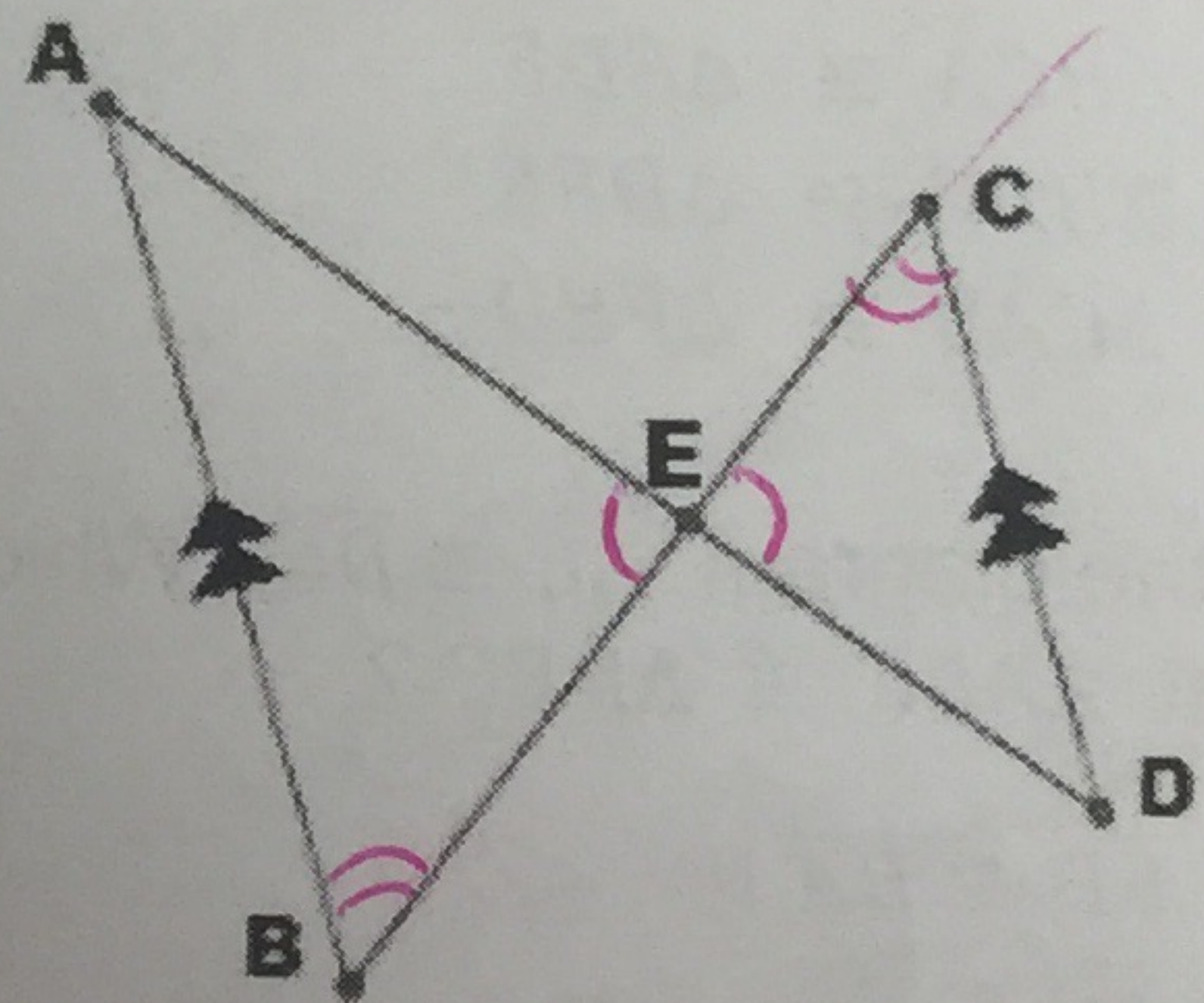


$$\frac{6}{10} = \frac{8}{15} \quad \frac{20}{36} = \frac{5}{9}$$

No, sides aren't proportional



Yes, AA



Yes, AA