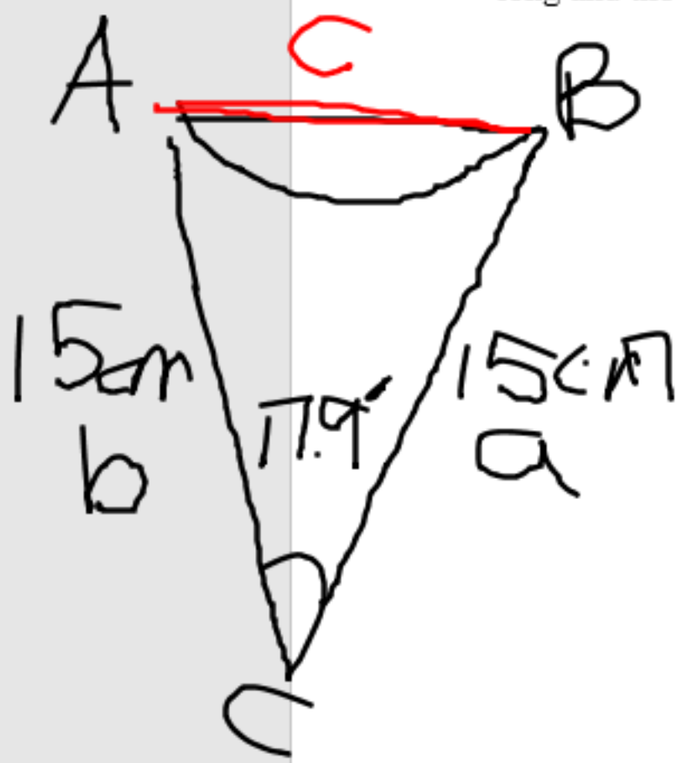
4. A funnel used to pour oil into an engine is in the shape of a cone. The sides of the cone are 15 cm long and the angle between the sides is 17.9°. What is the diameter of the cone?



$$c^2 = a^2 + b^2 - 2ab\cos C$$

1. Choose the best formula to solve each triangle....BLM 4.14.1...

(page 3)

5. Jesse is in a hot air balloon 6500 m above a lake. She measures the angle of depression to the far side of a lake to be 32° and the angle of depression to the near side of the lake to be 45°. Determine the distance across the lake.

1) a)

Q

$\angle P = 90°$

$\angle Q = 65°$

$\angle R = 25°$

$p = 15.4$ ft

$q = 14$ ft

$r = 6.4$ ft

$\angle R = 180 - 90 - 65$

$\angle R = 25°$

$\sin Q = \frac{O}{H}$

$\sin 65 = \frac{14}{p}$

$14 = (\sin 65)(p)$

$\frac{14}{\sin 65} = \frac{(\sin 65)(p)}{\sin 65}$

$15.4 = p$

$a^2+b^2=c^2$ → hypotenuse

$14^2+r^2=15.4^2$

$196+r^2=237.16$ −196

$\sqrt{r^2}=\sqrt{41.16}$

$r=6.4$