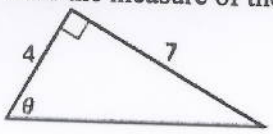
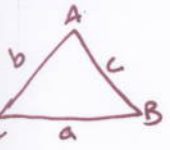
24. You are flying a kite and want to know its angle of elevation. The string on the kite is 31 meters long and the kite is level with the top of a building that you know is 21 meters high. Use an inverse trigonometric function to find the angle of elevation of the kite. $\sin\theta = \frac{21}{31}$ $\theta = \sin^{-1}\left(\frac{21}{31}\right)$ $\theta = 42.6°$

25. Find the measure of the angle θ.



$\tan\theta = \frac{7}{4}$

$\theta = \tan^{-1}\left(\frac{7}{4}\right)$ $\theta = 60.26°$



26. Given triangle ABC with $a = 8$, $A = 49°$, and $B = 21°$, find c. Round your answer to two decimal places.

$C = 110°$ $c = 9.96$ $b = 3.80$ law of sines

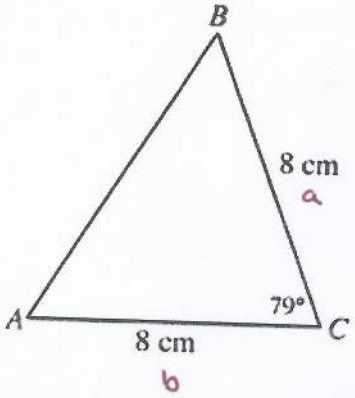
27. Solve triangle ABC given that $A = 51°$, $B = 50°$, and $b = 74$.

$C = 79°$ $a = 75.07$ $c = 94.83$ law of sines

28. Given triangle ABC with $a = 13$, $b = 15$, and $A = 27°$, find c. Round your answer to two decimal places.

2 triangles $B = 31.59°$ $C = 121.4°$ $c = 24.4$ | $B = 148.41°$ $C = 4.59°$ $c = 2.29$

29. Find the area of ΔABC. The figure is not drawn to scale.



$A = \frac{1}{2}ab\sin C$

$A = \frac{1}{2}(8)(8)\sin 79°$

$A = 31.4$ square cms

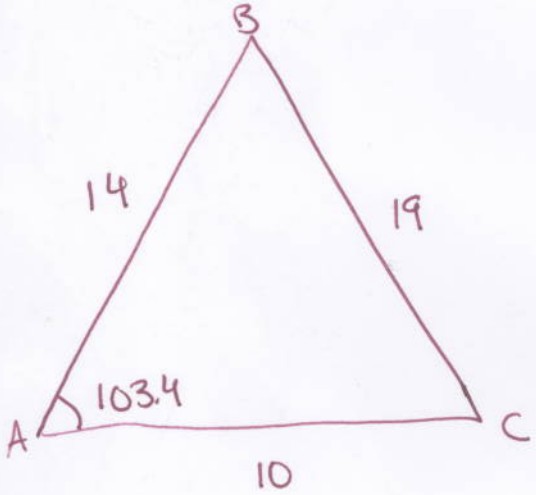
30. Solve ΔABC with $A = 33°$, $a = 6.5$, and $b = 3$.

$B = 14.56$ $C = 132.44$ $c = 8.81$ law of sines

31. Given triangle ABC with $b = 8$, $c = 5$, and $A = 58°$, find a. Round the answer to two decimal places.

$a = 6.83$ law of cosines

32. Solve triangle ABC given that $a = 19$, $b = 10$, and $c = 14$.



$\cos A = \frac{b^2 + c^2 - a^2}{2(bc)}$

$\cos A = \frac{10^2 + 14^2 - 19^2}{2(10 \cdot 14)}$

$A = 103.42$

$\frac{\sin C}{14} = \frac{\sin 103.4}{19}$

$C = 45.79$

$B = 180 - 103.42 - 45.79$

$B = 30.79$