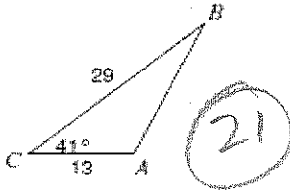


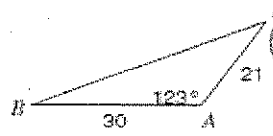
Find each measurement indicated. Round your answers to the nearest tenth.

1) Find AB



21

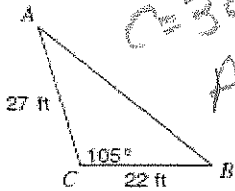
2) Find BC



45.02

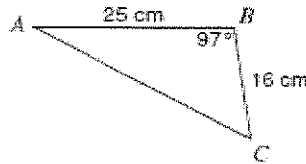
Solve each triangle. Round your answers to the nearest tenth.

3)



$c = 39$
 $A = 33.02^\circ$
 $B = 41.98^\circ$

4)



$b = 31.28$
 $A = 30.5^\circ$
 $C = 52.49^\circ$

- 5) For $\triangle ABC$, $a = 18$, $b = 6$, and $m\angle A = 28^\circ$. Find $m\angle B$ to the nearest whole degree.
 9°
- 7) For $\triangle DEF$, $d = 54$, $f = 27$, $m\angle D = 20^\circ$. Find $m\angle F$ to the nearest whole degree.
 $98.5^\circ \approx 99^\circ$

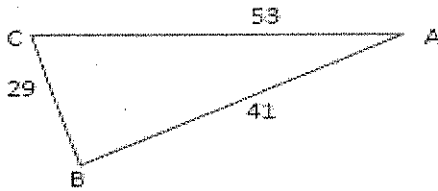
- 6) For $\triangle DEF$, $d = 24$, $m\angle D = 37^\circ$, and $m\angle E = 49^\circ$. Find e to the nearest whole degree.
 30.10
- 8) For $\triangle ABC$, $a = 42$, $c = 72$, and $m\angle C = 41^\circ$. Find $m\angle A$ to the nearest whole degree.
 $A = 22.5^\circ \approx 23^\circ$

- 9) For $\triangle ABC$, $a = 62$, $b = 53$, and $m\angle A = 54^\circ$. Find all possible $m\angle B$ to the nearest degree.
 $\frac{\sin 54}{62} = \frac{\sin B}{53}$
 $B = 43.8^\circ$ only

- 10) For $\triangle LMN$, $m = 8$, $n = 11$, and $m\angle M = 6^\circ$. Find all possible $m\angle N$ to the nearest degree.
 $\frac{\sin 6}{8} = \frac{\sin N}{11}$
 $N = 8.26$ OR 171.7

- 11) For $\triangle XYZ$, $y = 7$, $z = 5$, and $m\angle Y = 19^\circ$. Find all possible $m\angle Z$ to the nearest degree.
 $Z = 13.45^\circ$
- 12) For $\triangle ABC$, $a = 40$, $c = 49$, and $m\angle C = 32^\circ$. Find all possible $m\angle A$ to the nearest degree.
 $A = 25.6^\circ$

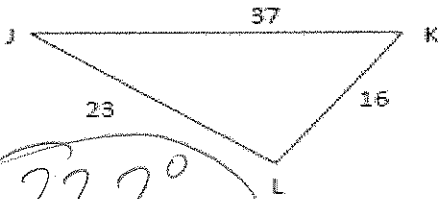
13) For $\triangle ABC$ find $m\angle B$ to the nearest tenth of a degree.



$$53^2 = 29^2 + 41^2 - 2(29)(41)\cos B$$

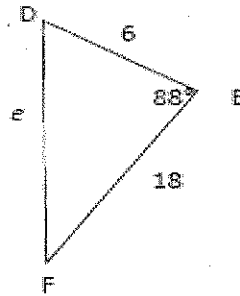
$$96.9^\circ \approx 97^\circ$$

15) For $\triangle JKL$ find $m\angle K$ to the nearest tenth of a degree.



$$22.2^\circ$$

14) For $\triangle DEF$ find e to the nearest hundredth.

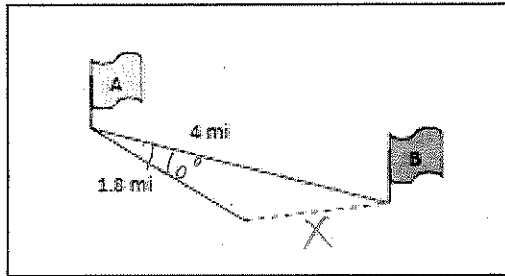


$$18.77$$

16) For $\triangle XYZ$ find the length of z to the nearest hundredth, given $x = 81$, $y = 75$, and $m\angle Z = 42^\circ$.

$$56.19$$

17) Mary is orienteering across a large flat plain from Marker A to Marker B which are 4 miles apart. After walking 1.8 miles she realizes she is 6° off-course. To the nearest tenth of a mile, how far from Marker B is she when she realizes her error?

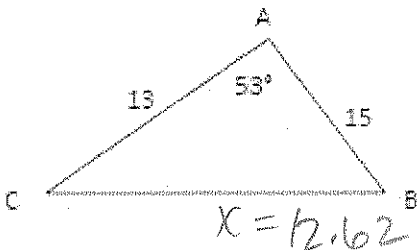


$$X^2 = 4^2 + 1.8^2 - 2(4)(1.8)\cos 6^\circ$$

$$X = 2.2 \text{ miles}$$

18) A navigator plots the course a plane is currently traveling. The plane is 300 miles from its destination. If it continues on its current course it will travel 325 miles and end up 125 miles due south of its destination. To the nearest degree, how many degrees is the plane off course?

19) For $\triangle ABC$ find $m\angle B$ to the nearest degree.



$$\frac{\sin B}{13} = \frac{\sin 53}{12.62}$$

$$B = 55.4^\circ$$