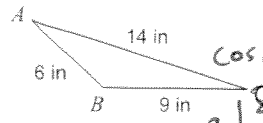
Solve each triangle. Round your answers to the nearest tenth.

1)



$\cos A = \frac{14^2+6^2-9^2}{2(14)(6)}$

$\cos A = .8988$

$\measuredangle A = 26°$

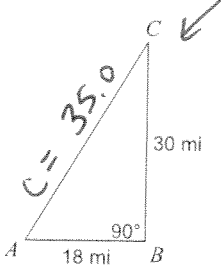
$\measuredangle C = 17°$

$\cos B = \frac{6^2+9^2-14^2}{2(6)(9)}$

$\cos B = -.7315$

$\measuredangle B = 137°$

2)



Right $\triangle$ $\Rightarrow$ $a^2+b^2=c^2$

$30^2+18^2=c^2$

$1224=c^2$

$34.9857=c$

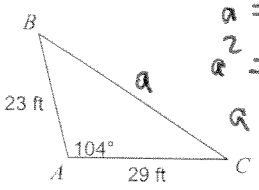
$35.0=c$

$\sin A = \frac{30}{35}$

$\measuredangle A = 59.0°$

$\measuredangle C = 31°$

3)



$a^2 = 23^2+29^2-2(23)(29)\cos A$

$a^2 = 1692.7238$

$a = 41.1$

$a = 41.1$

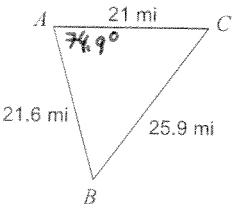
$\cos C = \frac{(41.1)^2+29^2-23^2}{2(41.1)(29)}$

$\measuredangle C = 32.8°$

$\measuredangle B = 43.2°$

$a = 41.1$

4)



$\cos A = \frac{21^2+21.6^2-25.9^2}{2(21)(21.6)}$

$\cos A = .2609678$

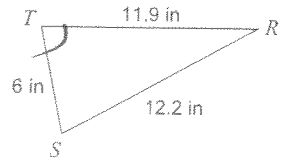
$\measuredangle A = 74.8725 \approx 74.9°$

$\cos B = \frac{21.6^2+25.9^2-21^2}{2(21.6)(25.9)}$

$\measuredangle B = 51.5°$ $\measuredangle C = 53.6°$

$\measuredangle A = 74.9°$

5)



$\cos T = \frac{11.9^2+6^2-12.2^2}{2(11.9)(6)} = \frac{28.77}{142.8}$

$\cos T = .2015$

$\measuredangle T = 78.4°$

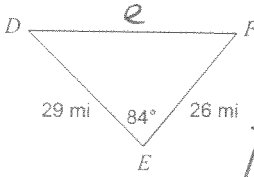
$\measuredangle S = 72.8°$

$\cos R = \frac{12.2^2+11.9^2-6^2}{2(12.2)(11.9)}$

$\cos R = .8763$

$\measuredangle R = 28.8°$

6)



$e^2 = 29^2+26^2-2(29)(26)\cos E$

$e = 36.9$ mi

$\measuredangle F = 51.5°$

$\measuredangle D = 44.5°$

7) $b = 15$ km, $c = 17$ km, $a = 28$ km

$\cos A = \frac{15^2 + 17^2 - 28^2}{2(15)(17)}$

$\cos A = -.5294$

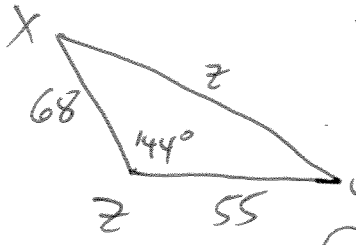
$\measuredangle A = 121.9657^\circ$

$\measuredangle A = 122^\circ$

$\measuredangle B = 27^\circ$ (L of C)

$\measuredangle C = 31^\circ$

8) In $\triangle ZXY$, $y = 68$ yd, $m\angle Z = 144^\circ$, $x = 55$ yd



$z^2 = 68^2 + 55^2 - 2(68)(55)\cos 144$

$z^2 = 13700.447$

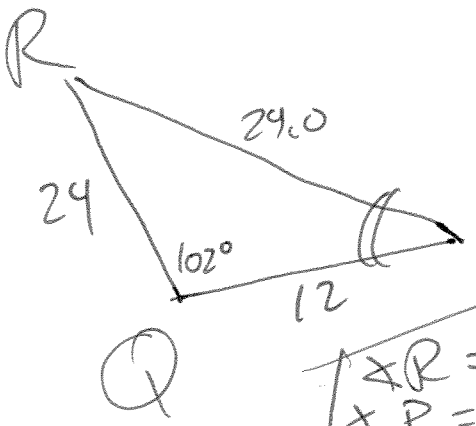
$z = 117.0$

$\measuredangle Y = 20^\circ$ (L of C)

$\measuredangle Z = 144^\circ$

$\measuredangle X = 16^\circ$

9) In $\triangle QRP$, $p = 24$ in, $m\angle Q = 102^\circ$, $r = 12$ in



$\measuredangle R = 24^\circ$

$\measuredangle P = 54^\circ$

$q = 29.0$ in

$q^2 = 24^2 + 12^2 - 2(24)(12)\cos 102$

$q^2 = 839.757$

$q = 28.97$

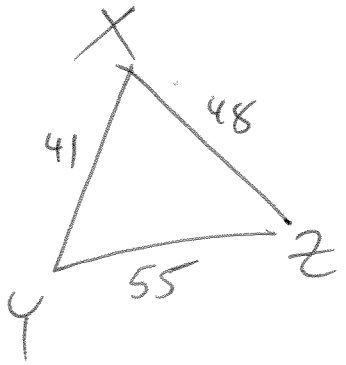
$q \approx 29.0$ in

$\cos P = \frac{12^2 + 29.^2 - 24^2}{2(12)(29)} = \frac{409}{696}$

$\cos P = .5876$

$\measuredangle P = 54.01 \approx 54^\circ$

10) In $\triangle XYZ$, $z = 41$ mi, $y = 48$ mi, $x = 55$ mi



$\cos Y = \frac{41^2 + 55^2 - 48^2}{2(41)(55)}$

$\measuredangle Y = 57.8^\circ$

$\measuredangle Z = 46.3^\circ$ (L of C)

$\measuredangle X = 75.9^\circ$