

Trig Review

1) $\sin 35^\circ = \frac{x}{6}$

$x = 6(\sin 35^\circ) \approx \boxed{3.441 \text{ ft}}$

3) $\cos X = \frac{6}{13}$

$X = \cos^{-1}\left(\frac{6}{13}\right)$

$X \approx \boxed{62.514^\circ}$

2) $\tan 42^\circ = \frac{4}{x}$

$x = 4/\tan 42^\circ$

$x \approx \boxed{4.442 \text{ ft}}$

4) $\frac{12}{\sin 75^\circ} = \frac{x}{\sin 50^\circ}$

$x = \frac{12 \sin 50^\circ}{\sin 75^\circ}$

$x \approx \boxed{9.517 \text{ ft}}$

5) $x^2 = 3^2 + 5^2 - 2(3)(5)\cos 100^\circ$

$x^2 = 39.209\dots$

$x = \sqrt{39.209\dots}$

$x \approx 6.2617\dots$

$x \approx \boxed{6.262 \text{ ft}}$

6) $\cos X = \frac{5^2 + 6^2 - 10^2}{2(5)(6)}$

$\cos X = \frac{-39}{60}$

$x = \cos^{-1}\left(\frac{-39}{60}\right)$

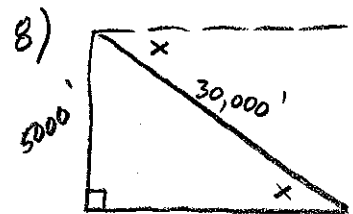
$x \approx \boxed{130.542^\circ}$

7) $\cos X = \frac{8^2 + 7^2 - 6^2}{2(8)(7)}$

$\cos X = \frac{77}{112}$

$x = \cos^{-1}\left(\frac{77}{112}\right)$

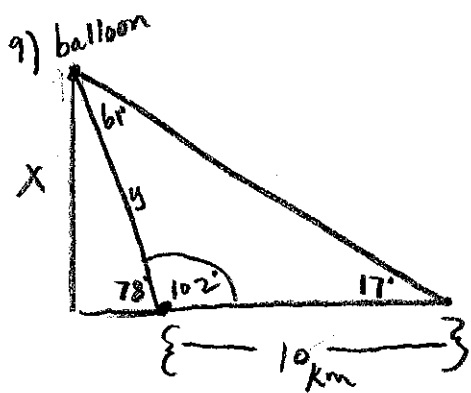
$x \approx \boxed{46.567^\circ}$



$\sin X = \frac{5000}{30000}$

$x = \sin^{-1}\left(\frac{1}{6}\right)$

$x \approx \boxed{9.594^\circ}$



$\frac{y}{\sin 17^\circ} = \frac{10}{\sin 61^\circ}$

$y = \frac{(\sin 17^\circ)10}{\sin 61^\circ}$

$y = 3.3428\dots$

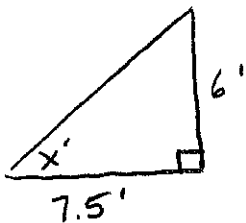
$\sin 78^\circ = \frac{x}{3.3428\dots}$

$x = (\sin 78^\circ)(3.3428\dots)$

$x = 3.2697\dots$

$x \approx \boxed{3.270 \text{ km}}$

10)



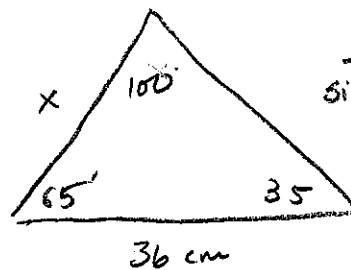
$\tan X = \frac{6}{7.5}$

$x = \tan^{-1}\left(\frac{6}{7.5}\right)$

$x = 38.6598\dots$

$x \approx \boxed{38.660^\circ}$

11)



$\frac{x}{\sin 35^\circ} = \frac{36}{\sin 100^\circ}$

$x = \frac{36(\sin 35^\circ)}{\sin 100^\circ}$

$x = 20.9672\dots$

$x \approx \boxed{20.967 \text{ cm}}$