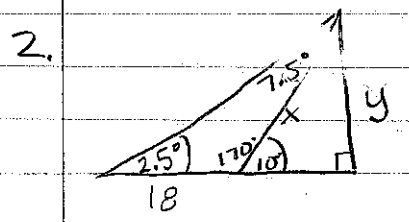


$$X^2 = 24^2 + 20^2 - 2(24)(20) \cos 110^\circ$$

$$X^2 = 1304.3$$

$$X = 36.1 \text{ km}$$



$$\frac{180}{-10} \quad \frac{180}{-170}$$

$$\frac{-170}{-2.5}$$

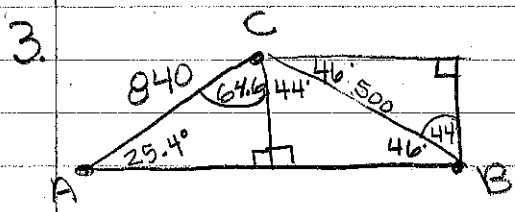
$$\frac{-2.5}{-7.5}$$

$$\frac{X}{\sin 2.5} = \frac{18}{\sin 7.5}$$

$$X = 6$$

$$\sin 10^\circ = \frac{y}{6}$$

$$y = 1 \text{ mi}$$



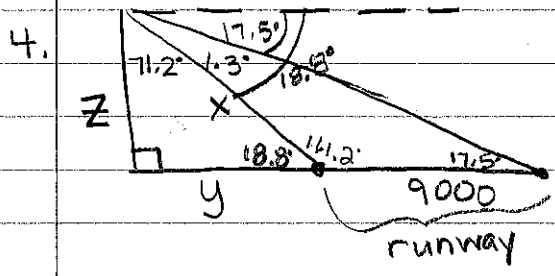
$$\frac{840}{\sin 46^\circ} = \frac{500}{\sin A}$$

$$A = 25.4^\circ$$

$$\frac{90}{-44}$$

$$\frac{-44}{46}$$

$$S 64.6^\circ W$$



$$\frac{90}{-18.8} \quad \frac{18.8}{-17.5} \quad \frac{90}{-71.2} \quad \frac{180}{-18.8} \quad \frac{180}{-1.3}$$

$$\frac{-17.5}{1.3} \quad \frac{18.8}{161.2} \quad \frac{-161.2}{17.5}$$

a.)  $\frac{9000}{\sin 1.3} = \frac{X}{\sin 17.5}$

$$X = 119289.1 \text{ ft}$$

or

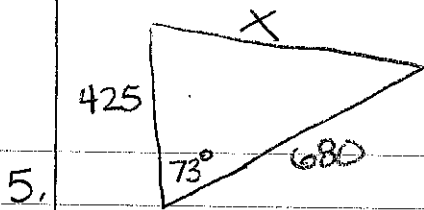
b.)  $\cos 18.8 = \frac{y}{119289.1}$

$$y = 112924.9 \text{ ft} \text{ or } \frac{112924.9}{5280} = 21.4 \text{ mi}$$

$$\frac{1129289.1 \text{ ft}}{5280 \text{ mi}} = 22.6 \text{ mi}$$

c.)  $\sin 18.8 = \frac{z}{119289.1}$

$$z = 38442.8 \text{ ft} \text{ or } \frac{38442.8}{5280} = 7.3 \text{ mi}$$



$$a.) \quad X^2 = 425^2 + 680^2 - 2(425)(680)\cos 73$$

$$X^2 = 474034.2$$

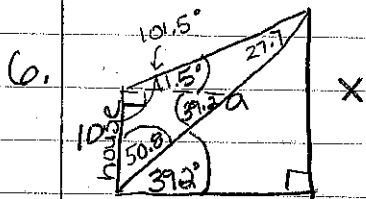
$$X = 688.5$$

$$\text{Perimeter} = 425 + 680 + 688.5 = \boxed{1793.5 \text{ ft}}$$

$$b.) \quad 1793.5(25) = 44837.5 = \text{cost of fencing}$$

$$44837.5(.93) = \boxed{\$41,698.88} \leftarrow \text{cost @ 7\% discount}$$

7% discount means I pay 93% of it ( $93\% = .93$ )



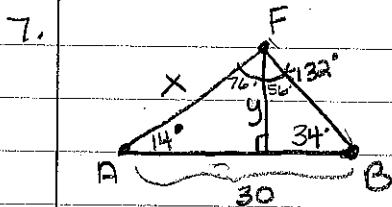
$$\begin{array}{r} 90 \\ - 39.2 \\ \hline 50.8 \end{array} \quad \begin{array}{r} 180 \\ - (90 + 11.5) = 101.5 \\ - 50.8 \\ \hline 27.7^\circ \end{array}$$

$$\frac{a}{\sin 101.5} = \frac{10}{\sin 27.7}$$

$$a = 21.1$$

$$\sin 39.2 = \frac{X}{21.1}$$

$$\boxed{X = 13.3 \text{ m}}$$



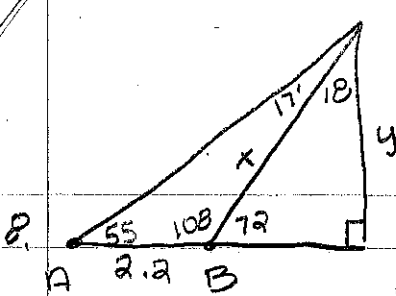
$$\begin{array}{r} 180 \\ - 14 \\ - 34 \\ \hline 132^\circ \end{array} \quad \begin{array}{r} 90 \\ - 14 \\ \hline 76^\circ \end{array}$$

$$\frac{X}{\sin 34} = \frac{30}{\sin 132}$$

$$X = 22.6$$

$$\sin 14 = \frac{y}{22.6}$$

$$\boxed{y = 5.5 \text{ km}}$$



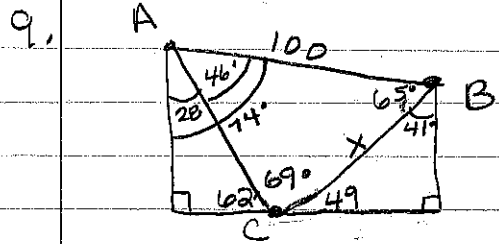
$$\begin{array}{r} 180 \\ -72 \\ \hline 108 \end{array} \quad \begin{array}{r} 180 \\ -55 \\ \hline -108 \\ 17^\circ \end{array} \quad \begin{array}{r} 90 \\ -72 \\ \hline \end{array}$$

$$\frac{x}{\sin 55} = \frac{2.2}{\sin 17}$$

$$x = 6.2$$

$$\sin 72 = \frac{y}{6.2}$$

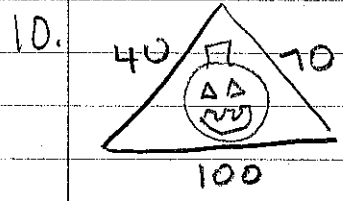
$$y = 5.9 \text{ mi}$$



$$\begin{array}{r} 74 \\ -28 \\ \hline 46^\circ \end{array} \quad \begin{array}{r} 90 \\ -28 \\ \hline 62^\circ \end{array} \quad \begin{array}{r} 90 \\ -41 \\ \hline 49^\circ \end{array} \quad \begin{array}{r} 180 \\ -62 \\ -49 \\ \hline 69^\circ \end{array} \quad \begin{array}{r} 180 \\ -46 \\ -69 \\ \hline 65^\circ \end{array}$$

$$\frac{x}{\sin 46} = \frac{100}{\sin 69}$$

$$x = 77.1 \text{ m}$$



$$s = \frac{40 + 70 + 100}{2} = 105$$

$$A = \sqrt{105(105-40)(105-70)(105-100)}$$

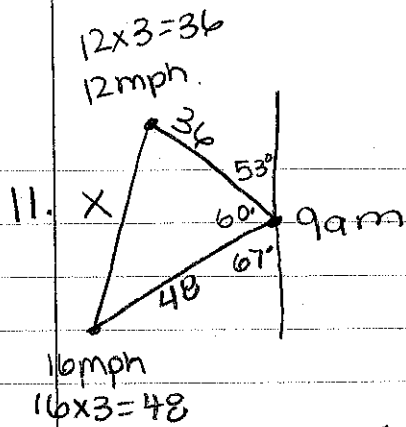
$$A = \sqrt{105(65)(35)(5)}$$

$$A = \sqrt{1194375}$$

$$A = 1092.9 \text{ ft}^2$$

$$\frac{1092.9}{3} = 364.3$$

$\approx 364$  pumpkins

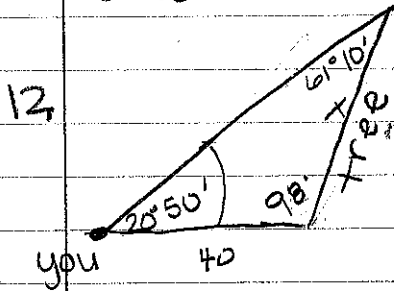


$$180 - 53 - 67 = 60^\circ$$

$$X^2 = 36^2 + 48^2 - 2(36)(48)\cos 60^\circ$$

$$X^2 = 1872$$

$$X = 43.3 \text{ mi}$$



$$180 - 98 - 20^\circ 50' = 61^\circ 10'$$

$\frac{16}{\times 60}$   
 $= 61^\circ 10'$

$$\frac{40}{\sin 61^\circ 10'} = \frac{X}{\sin 20^\circ 50'}$$

$$X = 16.2 \text{ ft}$$