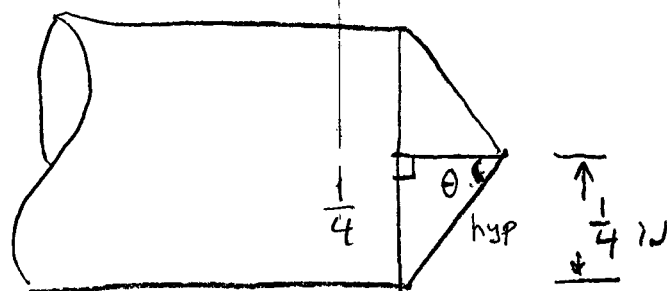


MTH113

TUESDAY 1-8-13

CLASS NOTES

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$$\tan \theta = \frac{\frac{1}{4}}{\frac{3}{8}} = \frac{1}{4} \cdot \frac{8}{3} = \frac{2}{3}$$

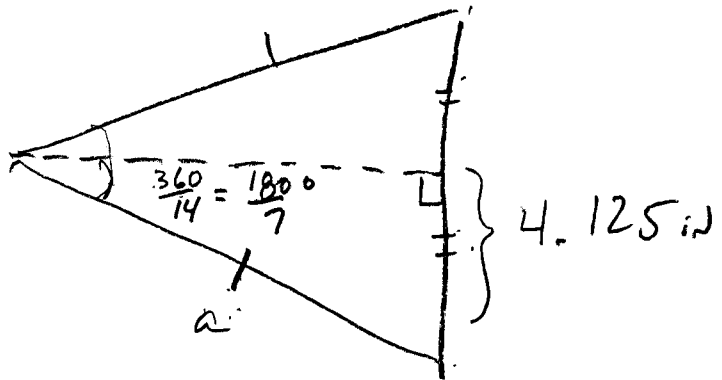
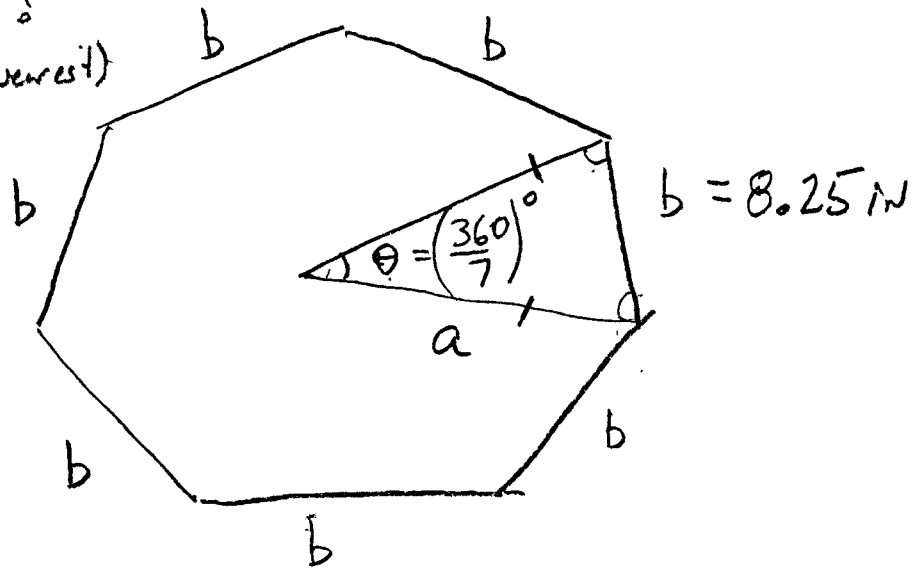
$$\tan^{-1} \left( \frac{2}{3} \right) = \theta = 33.690^\circ$$

$$= \boxed{34^\circ = \theta}$$

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P527

$a = ?$   
(0.01 nearest)



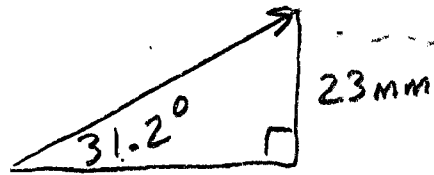
$$\sin\left(\frac{180}{7}\right) = \frac{4.125}{a}$$

$$a = \frac{4.125}{\sin\left(\frac{180}{7}\right)} = \frac{4.125}{0.4339}$$

$$a = 9.50715$$

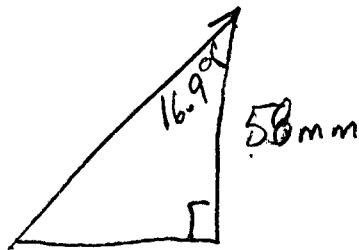
$$a = 9.51 \text{ in}$$

(81)



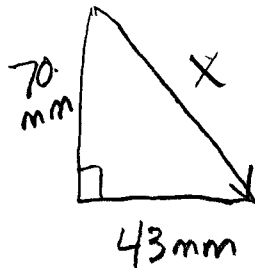
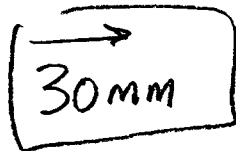
$$\sin 31.2 = \frac{23}{x}$$

$$x = \frac{23}{.5180} = 44.399$$



$$\cos 16.9 = \frac{58}{x}$$

$$x = \frac{58}{.9568} = 60.618$$



$$x^2 = 70^2 + 43^2$$

$$x^2 = 4900 + 1849$$

$$x = \sqrt{6749}$$

$$x = 82.15$$

$$\begin{aligned} \text{Total dist} &= 44.399 + 60.618 + 30 + 82.15 \\ &= 217.167 \\ &= \boxed{217\text{ mm} = \text{total path}} \end{aligned}$$