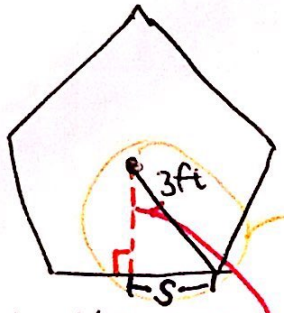
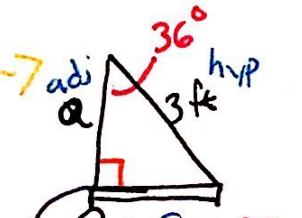
10-5 Note Book Question #1



Find the area

$\frac{360^\circ}{5} = 72^\circ$

$\frac{72}{2} = 36^\circ$



$\sin 36^\circ = \frac{\text{Side}}{3}$

$3 \cdot \sin 36^\circ = S$

Perimeter $= 10 \cdot S$

Area of a regular Polygon:

$A = \frac{1}{2}aP$, where a = apothem and P = Perimeter.

apothem

$(3)\cos 36^\circ = \left(\frac{a}{3}\right)\left(\frac{3}{1}\right)$

$(3)\cos 36^\circ = a$

Thus, $A = \frac{1}{2}(3 \cdot \cos 36^\circ)(10 \cdot 3 \cdot \sin 36^\circ)$

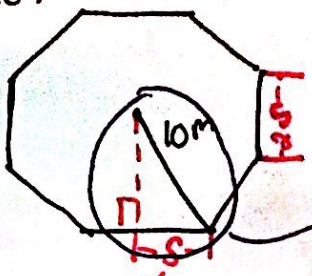
$= \frac{1}{2}(60)(\cos 36^\circ)(\sin 36^\circ)$

$\approx 14.27 \text{ ft}^2$

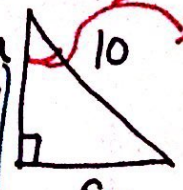
answer

10-5 Note Book Question #2

Find the Area.



$P = 16(s)$



$\frac{360}{8} = 45 \quad \frac{45}{2} = 22.5$

$\cos 22.5^\circ = \frac{a}{10}$

$\sin 22.5^\circ = \frac{s}{10}$

$(10)\sin 22.5^\circ = s$

$10 \cdot \cos 22.5 = a$

$A = \frac{1}{2} a P$

$= \frac{1}{2} (\cos 22.5)(10)(16)(10)(\sin 22.5)$

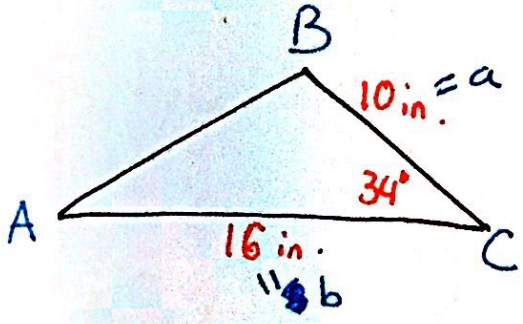
a

$(800)(\cos 22.5)(\sin 22.5) \approx 282.84 \text{ m}^2$

answer

10-5 Note Book Question #3

Find the Area.



$A = \frac{1}{2} a \cdot b \cdot \sin C$

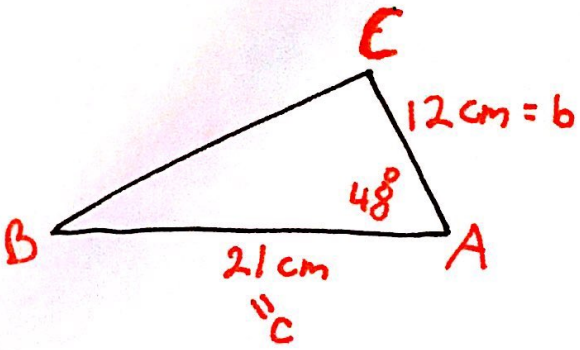
$= \frac{1}{2} \cdot 10 \cdot 16 \cdot \sin(34^\circ)$

$= 80 \sin(34^\circ)$

$\approx 44.74 \text{ in}^2$

Notebook Question #4

Find the area.



$$A = \frac{1}{2} b \cdot c \cdot \sin A$$

$$= \frac{1}{2}(12)(21) \sin 48^\circ$$

$$= (126) \cdot \sin 48^\circ$$

$$\approx 93.64 \text{ cm}^2$$

Answer