Trig and Area

SAS $A = \frac{1}{2}(\text{side})(\text{side})\sin(\text{angle})$

① $\frac{1}{2}(8)(6)\sin(87°)$

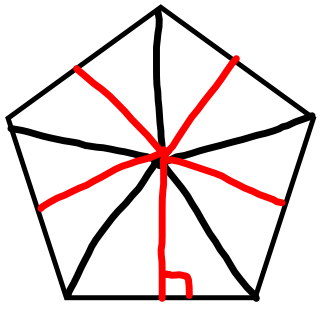
$24.0\ cm^2$

Area of a regular polygon

all sides $\cong$
all angles $\cong$

$A = \frac{1}{2}ap$

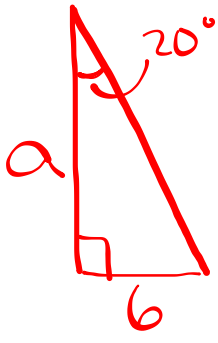
apothem, perimeter



⑨ $p = 108$

nonagon → 9 sides

side = 12



$\frac{360}{9} = 40°$

$\frac{40°}{2} = 20°$

$\tan 20° = \frac{6}{a}$

$a = \frac{6}{\tan 20°}$

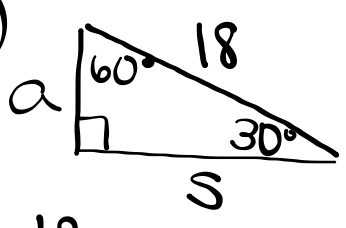
$A = \frac{1}{2}\left(\frac{6}{\tan 20°}\right)(108)$

$A = 890.2 \text{ mi}^2$

Area of Regular Polygons

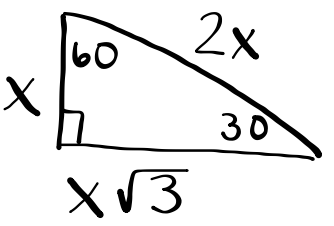
$A = \frac{1}{2}ap$

(11)



$\frac{360}{3} = 120°$

$\frac{120°}{2} = 60°$



$a = \frac{18}{2} = 9$

$s = 9\sqrt{3}$

$A = \frac{1}{2}(9)(9\sqrt{3})(2)(3)$

$= 243\sqrt{3}$

420.89