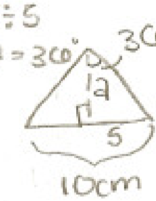
CH 10.5-.8 Review

Area of a Polygon

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

360 ÷ 5
72 ÷ 2 = 36°



$A = \frac{1}{2}(6.9)(50)$

$A = 172.0$

$P = 10 \times 5 = 50$

$\tan 36° = \frac{5}{a}$

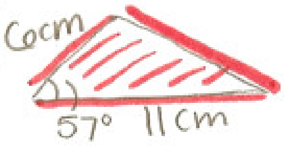
$a \tan 36 = 5$

$a = \frac{5}{\tan 36} = 6.9\text{ cm}$

Trig
Sin $\frac{O}{H}$
Cos $\frac{A}{H}$
Tan $\frac{O}{A}$

Area of a Δ that is not a right Δ

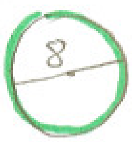
$A = \frac{1}{2} bc(\sin A)$



$A = \frac{1}{2}(11)(6)(\sin 57°) = 27.7\text{cm}^2$

Circles

$C = \pi d$



$C = \pi \cdot 8 = 25.1$ or 8π

$C = 2\pi r$

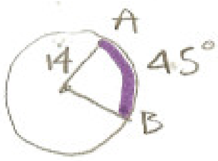
$C = 2\pi(8) = 50.3$ or 16π

$A = \pi r^2$

$A = \pi \cdot (3)^2 = 9\pi$ or 28.3

Arcs length

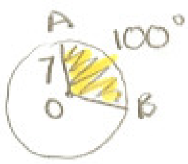
$\widehat{AB} = \frac{m\widehat{AB}}{360} \cdot \pi d$



$\widehat{AB} = \frac{45°}{360°} \times \pi(28) = 11.0$ or 3.5π

Area of Arcs

$AOB = \frac{m\widehat{AB}}{360} \times \pi r^2$



$AOB = \frac{100°}{360°} \times \pi(7)^2 = 42.8$ or 13.6π

Segments

$A = \frac{120}{360} \times \pi(6)^2 = 37.7$

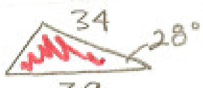
$A = \frac{1}{2}(6)(6)(\sin 120) = 15.6$

$37.7 - 15.6 = 22.1$

Ex:

① find the Area of an 8-gon with a perimeter of 80in

③ Find the area



⑤ Area

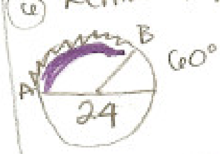
⑦ Area

⑧ Area in π

② Find a & x

④ Circumference

⑥ Length of $\widehat{AB}$ in π



⑨ Area

Answers: ① 482.8 in² ② a = 14.8 x = 6.1 ③ 311.3 ④ 94.3 & 301.1 ⑤ 7.5 ⑥ 25.1 ⑦ 153.9
⑧ 80π ⑨ 18.3