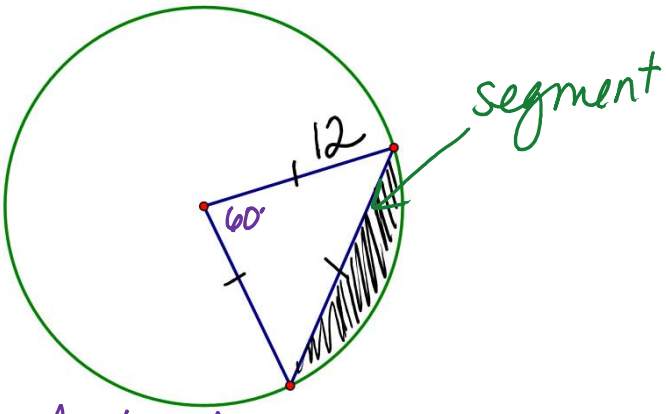
11.6 part 2

Monday, April 10, 2017 9:40 AM

The centers of the following circles are given. Find the area of the shaded region.

7.

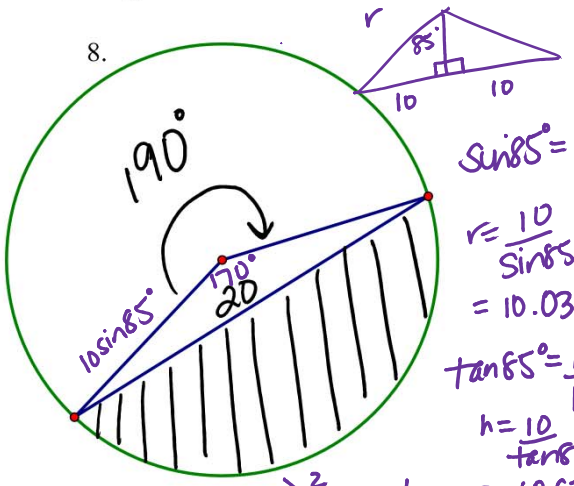


$\text{Area} = A_{\text{sector}} - A_{\text{EQ}\triangle}$

$= \frac{60}{360} \cdot \pi \cdot 12^2 - \frac{12^2\sqrt{3}}{4}$

$= 24\pi - 36\sqrt{3}$

8.



$\sin 85° = \frac{10}{r}$

$r = \frac{10}{\sin 85°}$

$= 10.038$

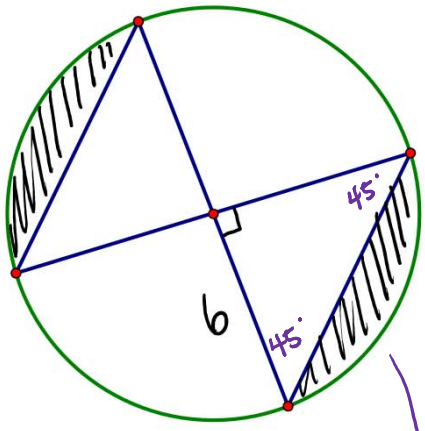
$\tan 85° = \frac{10}{h}$

$h = \frac{10}{\tan 85°}$

$A = \frac{170}{360} \cdot \pi (10.038)^2 - \frac{1}{2} \cdot 20 \cdot (10.875)$

$= 140.733$

9.

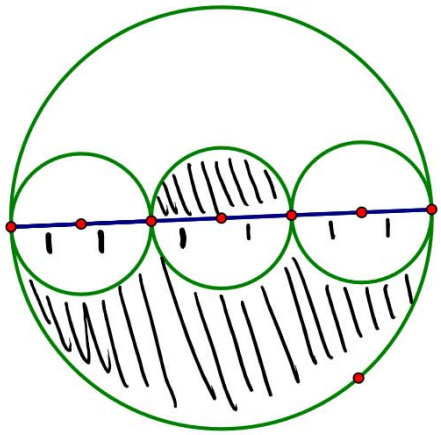


$A_{\text{me}} = \frac{90}{360} \cdot \pi \cdot 6^2 - \frac{1}{2} \cdot 6 \cdot 6$

$= 9\pi - 18$

$A_{\text{shaded}} = 18\pi - 36$

10.



$A_{\text{sm}\,\theta} = \pi$

$A_{\text{big}\,\theta} = 9\pi$

$A_{\text{shaded}} = \frac{9\pi}{2} - \frac{3\cdot\pi}{2} + \frac{\pi}{2}$

$= \frac{7\pi}{2}$