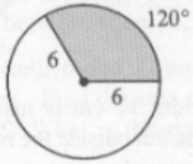
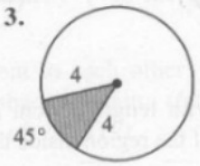
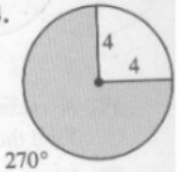
Classroom Exercises

Find the arc length and area of each shaded sector.

1. 

2. 

3. 

4. 

Written Exercises

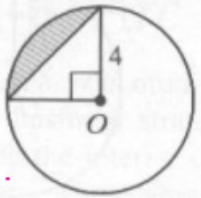
Sector AOB is described by giving $m\angle AOB$ and the radius of circle O. Make a sketch and find the length of $\overset{\frown}{AB}$ and the area of sector AOB.

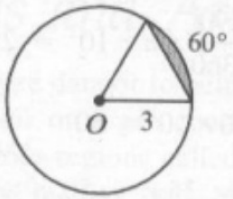
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
$m\angle AOB$	30	45	120	240	180	270	40	320	108	192
radius	12	4	3	3	1.5	0.8	$\frac{9}{2}$	$1\frac{1}{5}$	$5\sqrt{2}$	$3\sqrt{3}$

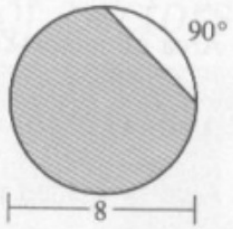
11. The area of sector AOB is 10π and $m\angle AOB = 100$. Find the radius of circle O.

12. The area of sector AOB is $\frac{7\pi}{2}$ and $m\angle AOB = 315$. Find the radius of circle O.

Find the area of each shaded region. Point O marks the center of a circle.

13. 

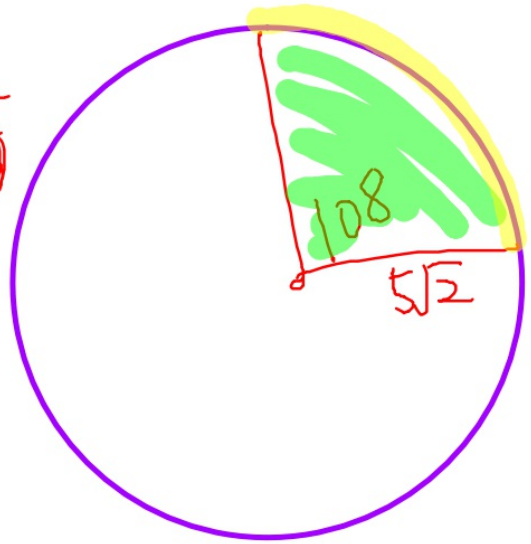
14. 

15. 

HW 11.6
orange

- Pg. 453 (CE): # 2, 4
- Pg. 453 (WE): #1-14,

$\frac{108}{360} = \frac{12}{40} = \frac{6}{20} = \frac{3}{10}$



$\frac{3}{10} 2 \cdot \pi \cdot 5\sqrt{2}$

$\frac{3}{10} 10\pi\sqrt{2}$

$3\sqrt{2}\pi$

$3\pi\sqrt{2}$

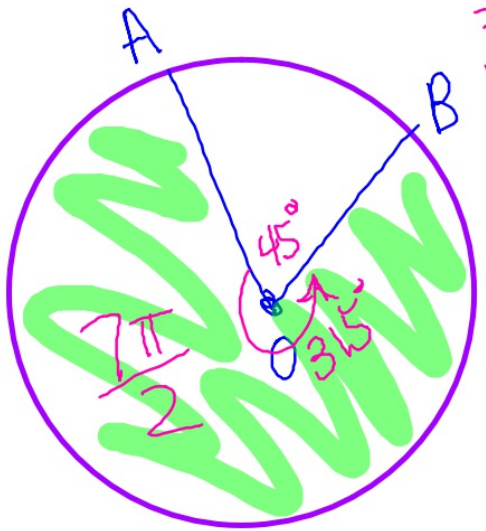
$\frac{3}{10} \pi (5\sqrt{2})^2$

$5 \cdot 5 \cdot 2$

$\frac{3}{10} \cdot \frac{5}{50} \pi = 15\pi$

Area of Sect.

#12



$\frac{45}{360} = \frac{1}{8}$

$\frac{315}{360} = \frac{7}{8}$

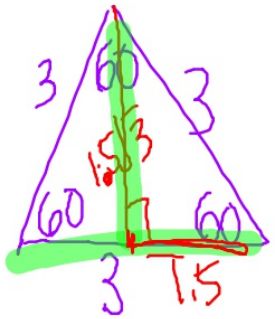
SOLVE FOR R

$\frac{1}{8}(\pi R^2) = \frac{7\pi}{2}$

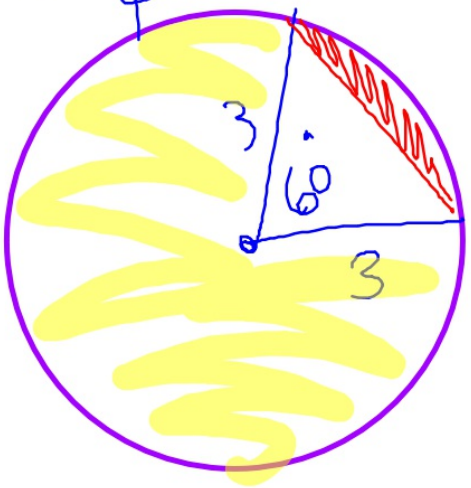
$\frac{R^2}{8} = \frac{14}{2}$

$R = 2$

Area $\triangle = \frac{1}{2}(3)\left(\frac{3}{2}\sqrt{3}\right) = \frac{9\sqrt{3}}{4}$



$\frac{3}{2}\pi - \frac{9\sqrt{3}}{4}$



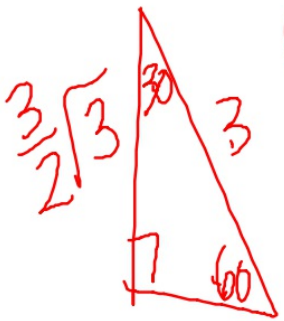
Area of whole ⊙

$3^2\pi = 9\pi$

$\frac{60}{360} = \frac{1}{6}$

$\frac{1}{6}(9\pi) =$

$\frac{3}{2}\pi$



$1.5\sqrt{3}$ or $\frac{3}{2}\sqrt{3}$