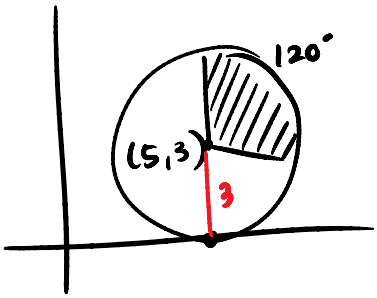
13.7 homework
pgs. 638 - 640 #2, 3, 5, 7,10, 11, 14, 15

#2 find the area of the shaded sector

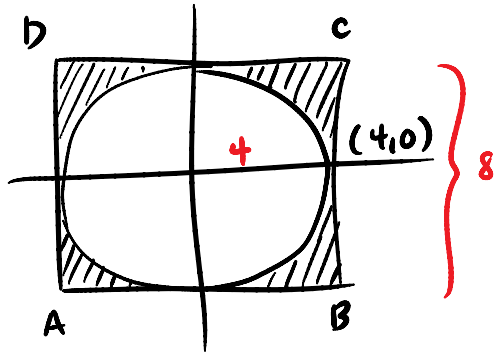


$A_{\odot} = 9\pi$

$A_{sec} = \frac{1}{3} \cdot 9\pi = \boxed{3\pi}$

#3 Find to the nearest tenth, the area of the shaded region in each diagram

a. ABCD is a square

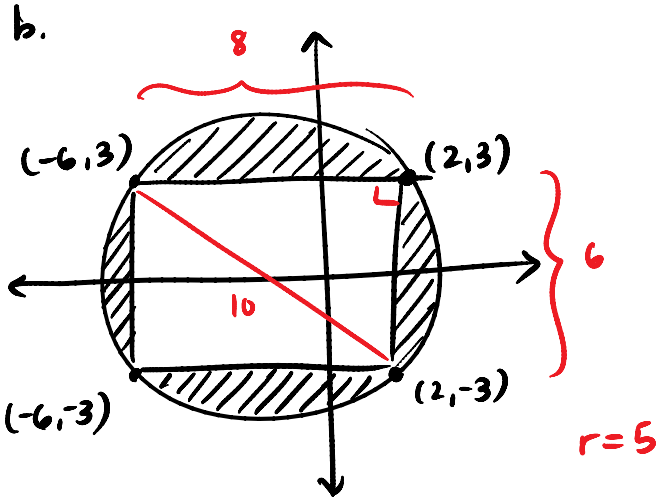


$A_{SQ} = 64$

$A_{\odot} = 16\pi$

$A_{sh} = 64 - 16\pi \approx \boxed{13.7}$

b.

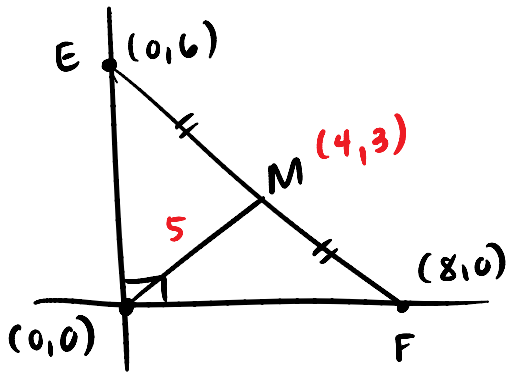


$A_{rec} = 48$

$A_{\odot} = 25\pi$

$A_{sh} = 25\pi - 48 \approx \boxed{30.5}$

#5



Find

a. $OM = \sqrt{(4)^2+(3)^2}$

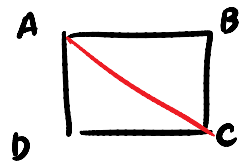
$= \boxed{5}$

b. EM $\boxed{5}$

c. FM $\boxed{5}$

#7 In rectangle ABCD $A = (2,7)$

$C = (8,15)$



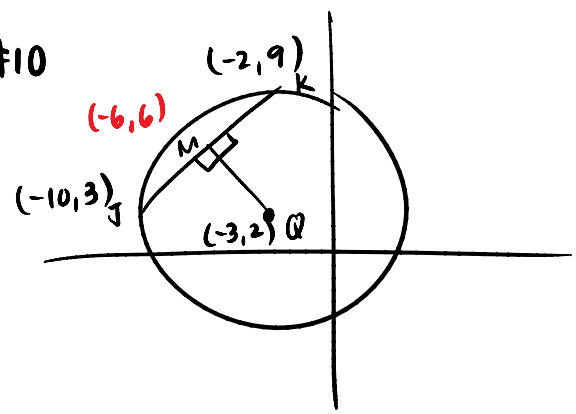
diagonals are $\cong$

$d = \sqrt{(6)^2+(8)^2}$

$d = \sqrt{100}$

$d = \boxed{10}$

#10



JK is a chord of ⊙Q

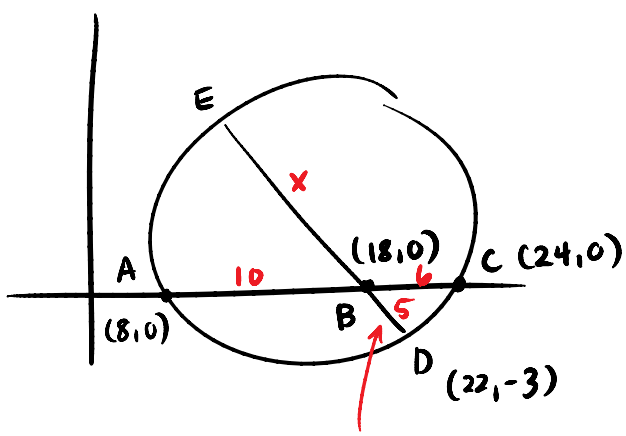
$\overline{QM} \perp \overline{JK}$

Find QM $= \sqrt{(-3+6)^2+(6-2)^2}$

$= \sqrt{3^2+4^2}$

$= \boxed{5}$

#11



Find BE

"CHORD-CHORD"

$5 \cdot x = 10 \cdot 6$

$5x = 60$

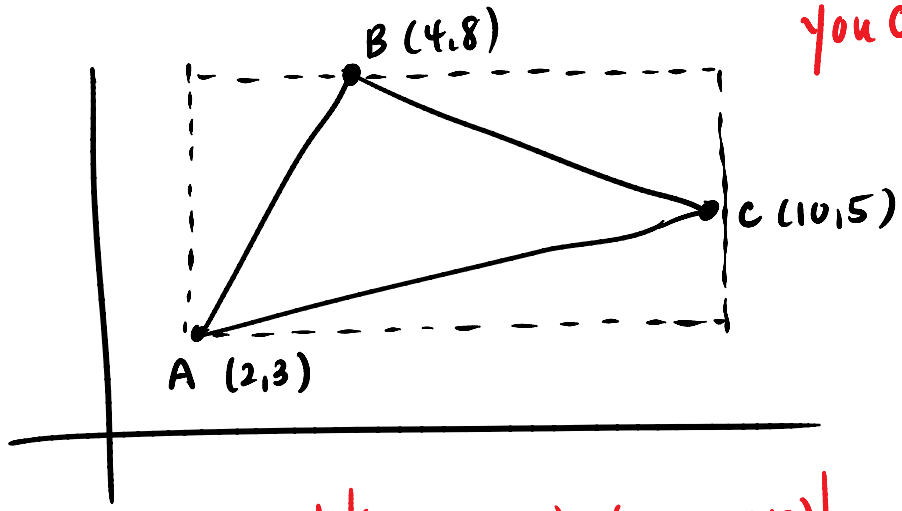
$\boxed{x = 12}$

$d = \sqrt{(4)^2+(3)^2}$

$d = 5$

#14 In the figure marked, what is the area of ΔABC?

You CAN use "shoelace" here :)



$$\begin{vmatrix} 4,8 \\ 10,5 \\ 2,3 \\ 4,8 \end{vmatrix}$$

$$A = \frac{1}{2}\left|(20+30+16)\ (80+10+12)\right|$$

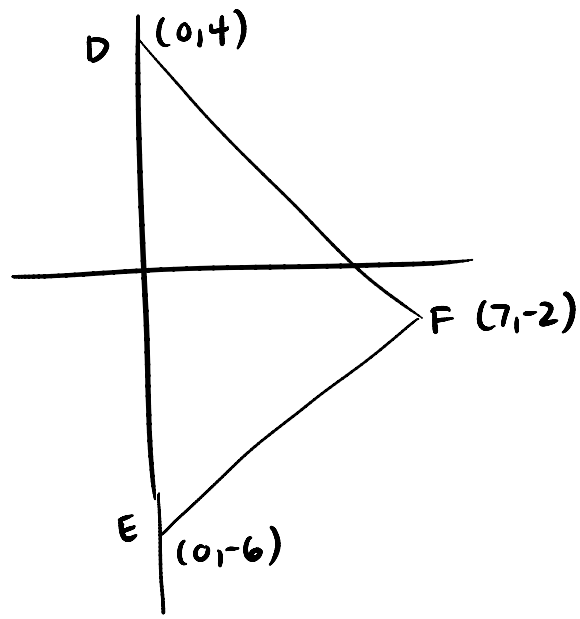
$$= \frac{1}{2}\left|66-102\right|$$

$$= \frac{1}{2}\left|-36\right|$$

$$= \boxed{18}$$

OR you can simply find area of Δ's :)

#15 What is the area of ΔDEF



$$\begin{vmatrix} 0,4 \\ 7,-2 \\ 0,-6 \\ 0,4 \end{vmatrix}$$

$$A = \frac{1}{2}\left|(0-42+0)-(28+0+0)\right|$$

$$= \frac{1}{2}\left|(-42)-(28)\right|$$

$$= \frac{1}{2}(70) = \boxed{35}$$