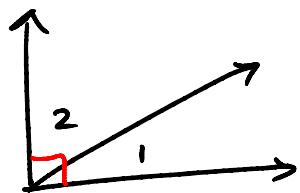


Section 2.1
pg. 63: 2, 3, 7-12, 14

- #2 a.) Given $\overline{JM} \perp \overline{JK}$ b.) Given: $\overrightarrow{RO} \perp \overrightarrow{PN}$ c.) $\overline{OT} \not\perp \overline{SW}$
-
- X MJK**
-
- X NOR, X POR**
-
- NONE**

#3 $\overline{AB} \perp \overline{BC}$

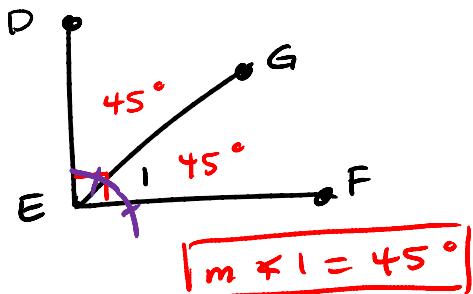
a.) $\angle 2 = 68^\circ 17' 34''$



$$\begin{aligned} 90^\circ \\ - 68^\circ 17' 34'' \end{aligned} \Rightarrow \begin{aligned} 89^\circ 59' 60'' \\ 68^\circ 17' 34'' \end{aligned}$$

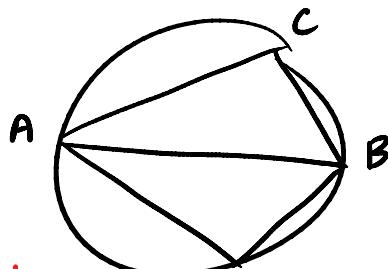
21^\circ 42' 26''

b.) $\overleftrightarrow{DE} \perp \overleftrightarrow{EF}$
 \overrightarrow{EG} bisects $\angle DEF$



#7 Given: $\angle ACB = 90^\circ$
 $\overline{AD} \perp \overline{BD}$

Prove: $\angle C \cong \angle D$



Statements

1. $\angle ACB = 90^\circ$
2. $\overline{AD} \perp \overline{BD}$
3. $\angle D$ is a right \angle
4. $\angle C$ is a right \angle
5. $\angle C \cong \angle D$

Reasons P

1. Given
2. Given
3. If 2 segs are $\perp \rightarrow$ form a right \angle
4. If an \angle has a measure of $90^\circ \rightarrow$ right \angle
5. If 2 \angle 's are right \angle 's $\rightarrow \angle$'s \cong

#8 $\angle MOR = (3x+7)^\circ$ 43
 $\angleROP = (4x-1)^\circ$ 47
 $\overline{MO} \perp \overline{OP}$

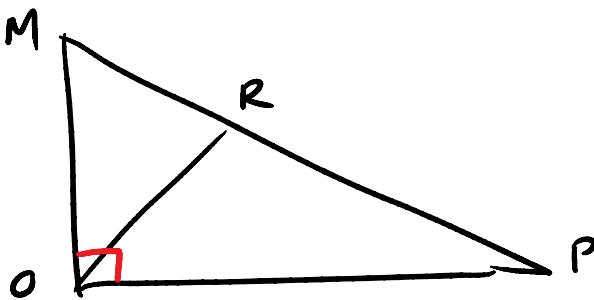
Which angle is larger
 $\angle MOR$ or $\angle ROP$

$$3x+7 + 4x-1 = 90$$

$$7x+6=90$$

$$7x=84$$

$$x=12$$

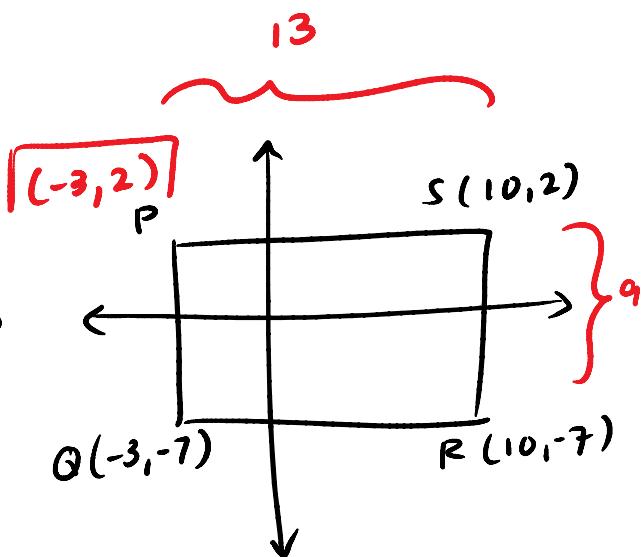


#9 On your own

#10 PQRS is a rectangle.

- Find the coordinates of point P
- The area of the rectangle

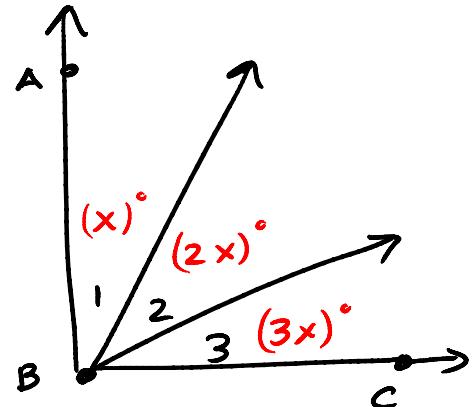
$$A = 13 \cdot 9 \\ = 117 \text{ u}^2$$



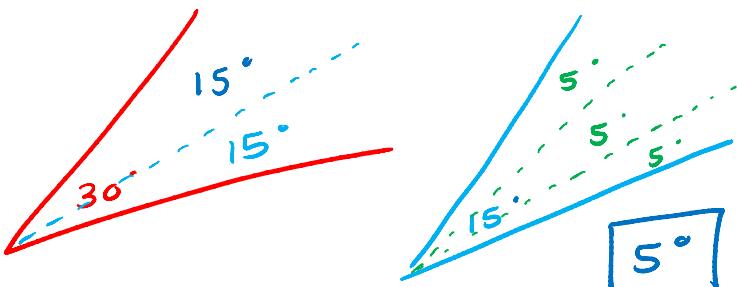
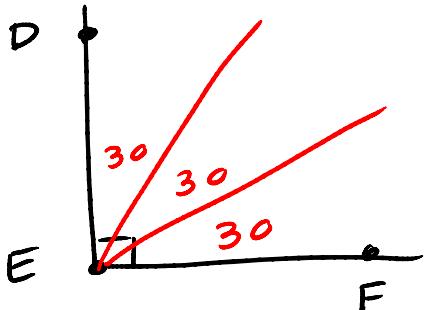
#11 $\overleftrightarrow{AB} \perp \overleftrightarrow{BC}$ and angles 1, 2, and 3 are in the ratio of 1:2:3.
 Find the measure of each angle

$$x + 2x + 3x = 90 \\ 6x = 90 \\ x = 15$$

$m\angle 1 = 15^\circ$
$m\angle 2 = 30^\circ$
$m\angle 3 = 45^\circ$



#12 Line DE is perpendicular to line EF. The resulting angle is trisected, then one of the new angles is bisected, and then one of the resulting angles is trisected. How large is the smallest angle?



#14 Given:

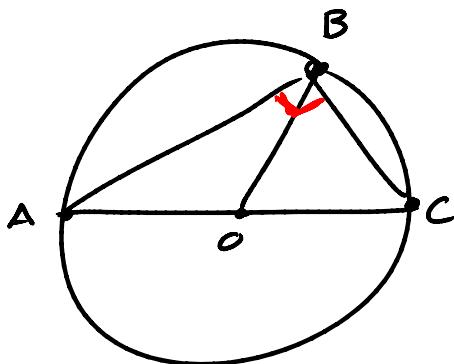
$$\overline{AB} \perp \overline{BC}$$

$$\angle ABO = (2x + y)^\circ$$

$$\angle OBC = (6x + 8)^\circ$$

$$\angle AOB = (23y + 90)^\circ$$

$$\angle BOC = (4x + 4)^\circ$$



Find:
 $\angle ABO$

$$22^\circ$$

2 VARIABLES!!! SO 2 Equations!

$$1.) 2x + y + 6x + 8 = 90$$

$$8x + y + 8 = 90$$

$$8x + y = 82$$

$$2.) 23y + 90 + 4x + 4 = 180$$

$$4x + 23y + 94 = 180$$

$$4x + 23y = 86$$

LINE 'EM UP: $8x + y = 82 \Rightarrow 8x + y = 82$

$$-2(4x + 23y = 86) \Rightarrow -8x - 46y = -172$$

$$-45y = -90$$

$$y = 2$$

$$8x + 2 = 82$$

$$8x = 80$$

$$x = 10$$

$$\angle ABO = 2x + y$$