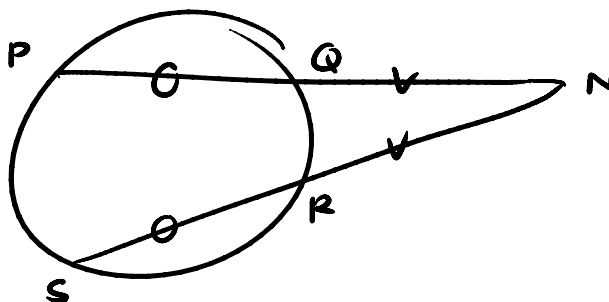


#3 $\overline{PQ} \cong \overline{SR}$

$\overline{QN} \cong \overline{RN}$

Conclusion: $\overline{PN} \cong \overline{SN}$



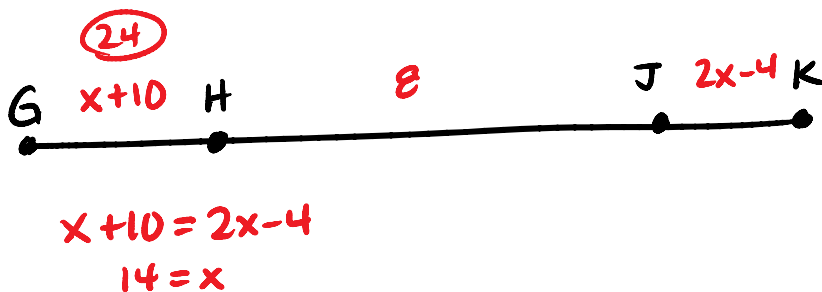
Statements

Reasons

1. $\overline{PQ} \cong \overline{SR}$
2. $\overline{QN} \cong \overline{RN}$
3. $\overline{PN} \cong \overline{SN}$

1. Given
2. Given
3. If 2 \cong segs are added to 2 \cong segs \rightarrow sums \cong

#6 Given: $\overline{GH} \cong \overline{JK}$
 $GH = x + 10$
 $HJ = 8$
 $JK = 2x - 4$

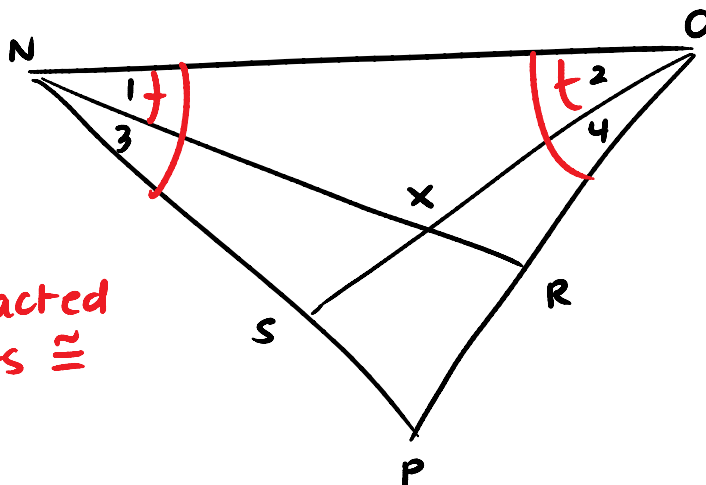


Find: $GJ = 24 + 8$
 $= \boxed{32}$

#7 Given: $\angle PNO \cong \angle PON$
 $\angle 1 \cong \angle 2$

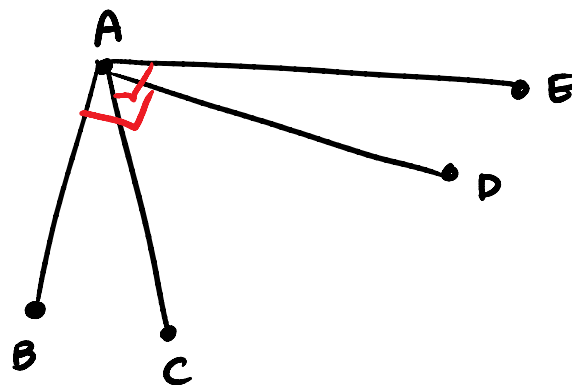
Conclusion: $\angle 3 \cong \angle 4$

If $\cong \angle$'s are subtracted from $\cong \angle$'s \rightarrow diffs \cong



#10 Given. $\angle BAD$ is a right \angle
 $\overline{CA} \perp \overline{AE}$

Prove: $\angle BAC \cong \angle EAD$



Statements

Reasons

1. $\angle BAD$ is a right \angle
2. $\overline{CA} \perp \overline{AE}$
3. $\angle EAC$ is a right \angle
4. $\angle BAD \cong \angle EAC$
5. $\angle BAC \cong \angle EAD$

1. Given
2. Given
3. If 2 segs are $\perp \rightarrow$ form \angle
4. If 2 \angle 's are \angle 's $\rightarrow \angle$'s \cong
5. If the same \angle is subtracted from $\cong \angle$'s \rightarrow diffs \cong

#14 $\angle A$ is comp. to $\angle B$
 $\angle C$ is comp. to $\angle B$
 $\angle A = (3x + y)^\circ$
 $\angle B = (x + 4y + 2)$
 $\angle C = (3y - 3)$

Find: $m \angle B$

$$3x + y + x + 4y + 2 = 90$$

$$4x + 5y + 2 = 90$$

$$\boxed{4x + 5y = 88}$$

$$x + 4y + 2 + 3y - 3 = 90$$

$$x + 7y - 1 = 90$$

$$\boxed{x + 7y = 91}$$

$$\begin{array}{rcl} 4x + 5y = 88 & \Rightarrow & 4x + 5y = 88 \\ -4(x + 7y = 91) & \Rightarrow & -4x - 28y = -364 \\ \hline & & -23y = -276 \end{array}$$

$$\boxed{y = 12}$$

$$\begin{aligned} \angle B &= 7 + 4(12) + 2 \\ &= 7 + 48 + 2 \\ &= \boxed{57} \end{aligned}$$

$$\begin{aligned} x + 7(12) &= 91 \\ x + 84 &= 91 \\ \boxed{x} &= \boxed{7} \end{aligned}$$

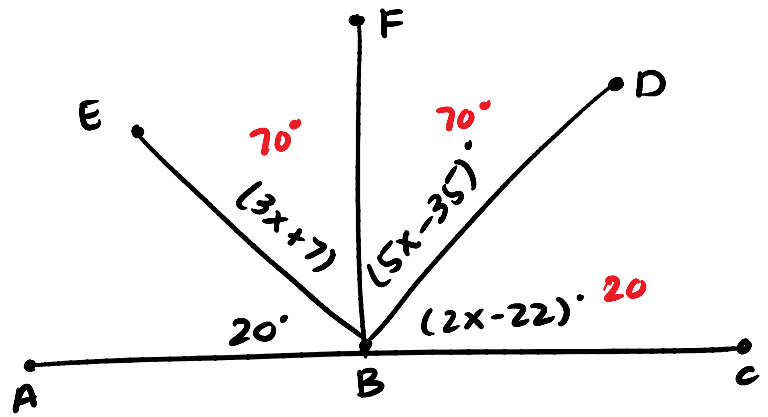
#17 \overrightarrow{BF} bisects $\angle DBE$

a. Does \overrightarrow{BF} bisect $\angle CBA$

b. What did you discover about $\angle ABC$ and \overrightarrow{BF}

$$\angle ABC = 180^\circ$$

$$\overrightarrow{AC} \perp \overrightarrow{BF}$$

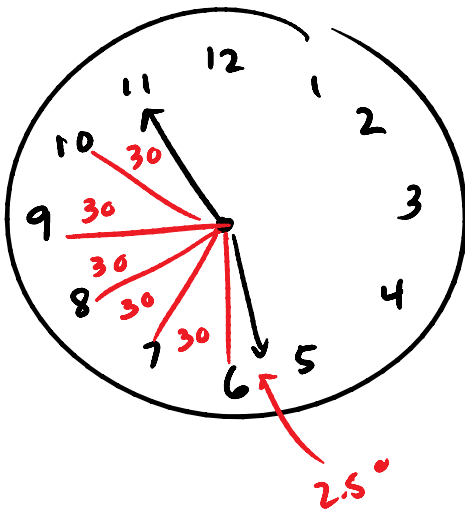


$$5x - 35 = 3x + 7$$

$$2x = 42$$

$$x = 21$$

#19 Find the measure of the angle formed by the hands of the clock at 5:55



$$\frac{55}{60} \cdot 360 = 27.5$$

$$152.5^\circ$$