

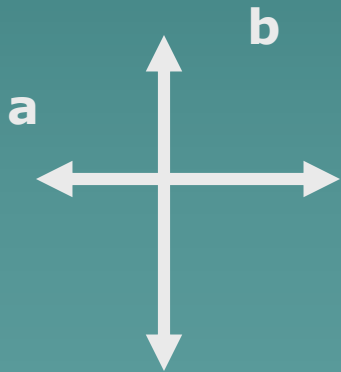
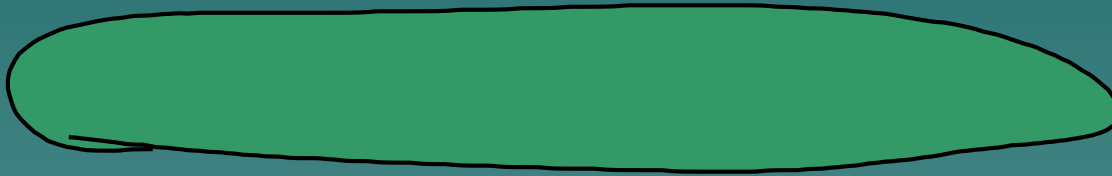
Warm Up

- ◆ Read “A Look Back and A Look Ahead...”
 - ◆ Pg 61 in Geometry Book
- ◆ Write a short paragraph on your feelings about geometry so far. Where do you think your challenges will be?

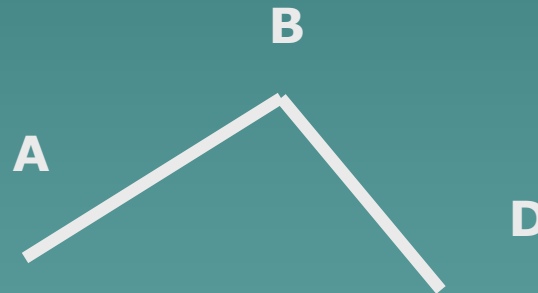
2.1

Perpendicularity

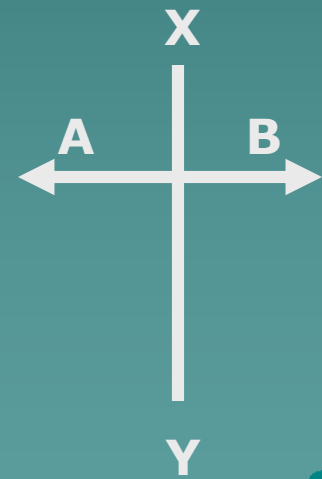
Perpendicular: lines, rays or segments that intersect at right angles.



$a \perp b$

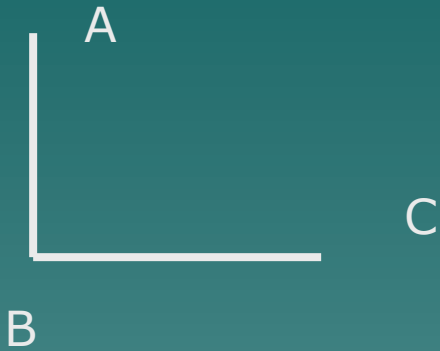


$\overline{AB} \perp \overline{BD}$

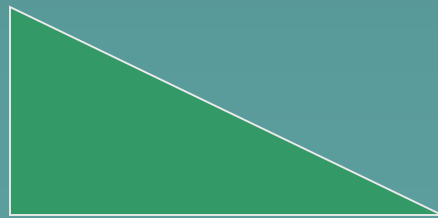
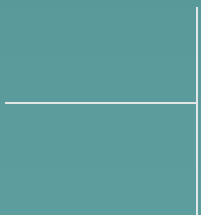


$\overline{XY} \perp \overleftrightarrow{AB}$

If $\angle B$ is a right angle, then $\overline{AB} \perp \overline{BC}$



Can't assume \perp unless you have a right angle or given.

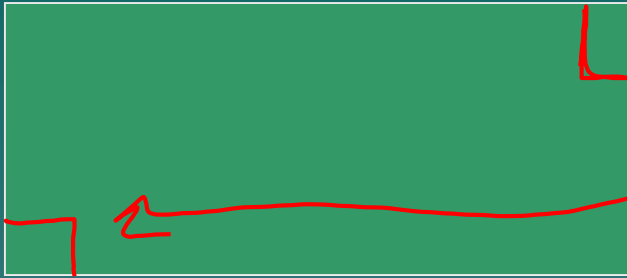


Perpendicular Definition

- ◆ If 2 segments are \perp , then they form a rt \angle .
- ◆ If 2 segments form a rt \angle , then they are \perp .

A

D



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

$\overline{DC} \perp \overline{AD}$

Conclusion: $\angle B \cong \angle D$

B

C



Statements	Reasons
1. $\overline{AB} \perp \overline{BC}$	1 Given
2. $\angle B$ is a right angle.	2 If two segments are \perp they form a right angle.
3. $\overline{DC} \perp \overline{AD}$	3 Given
4. $\angle C$ is a right angle.	4 Same as 2
5. $\angle B \cong \angle C$	5 If angles are right angles, they are \cong .

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

Reasons

Given

2. $\angle B$ is a right angle.

1 Given

Given

2 If two segments are \perp they form a right angle.

3. $\overline{DC} \perp \overline{AD}$

3 Given

\perp lines form rt \angle 's

4. $\angle C$ is a right angle.

4 Same as 2

\perp lines form rt \angle 's

5. $\angle B \cong \angle C$

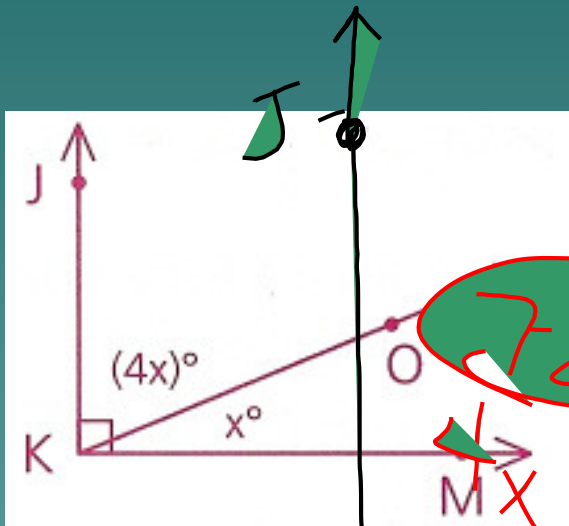
5 If angles are right angles, they are \cong .

If 2 \angle 's are rt \angle 's, then they are \cong

Given: $\vec{KJ} \perp \vec{KM}$

$\angle JKO$ is 4 times $\angle MKO$

Find both angles (Draw and label the diagram)



Since $\vec{KJ} \perp \vec{KM}$, $m\angle JKO + m\angle MKO = 90$.

$$4x + x = 90$$

$$5x = 90$$

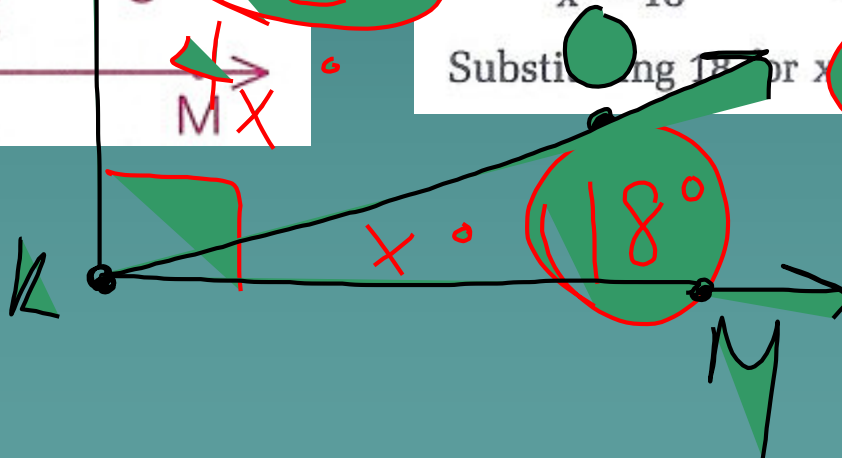
$$x = 18$$

Substituting 18 for x , $m\angle JKO = 72$.

$$4x + x = 90$$

$$5x = 90$$

$$x = 18$$



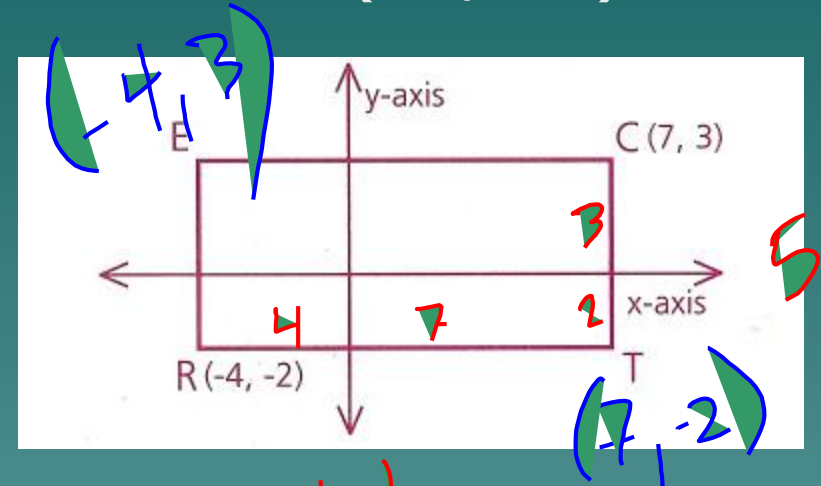
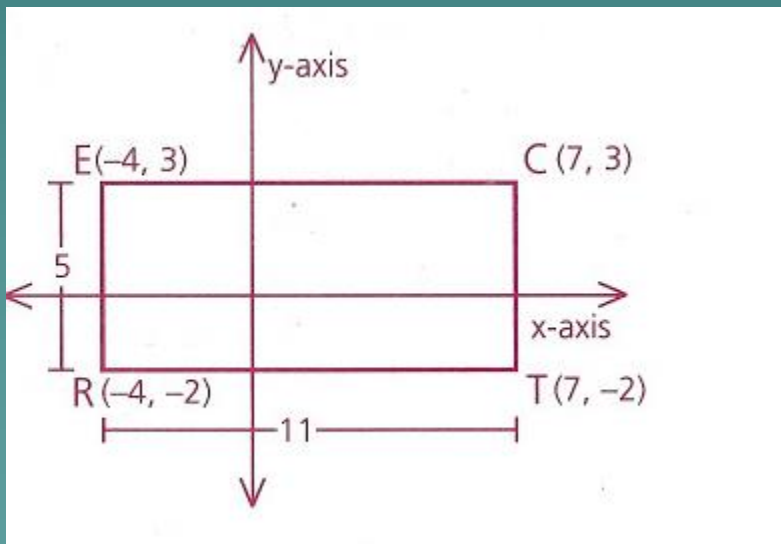
Given $EC \parallel x$ axis

$CT \parallel y$ axis

Find the area of RECT

Point C (7,3)

Point R (-4, -2)



$$\begin{aligned} \text{Area of rectangle} &= \text{base} \times \text{height} \\ A &= bh \\ &= 11(5) \\ &= 55 \end{aligned}$$

Homework

◆ P. 64 #6, 7, 10, 11