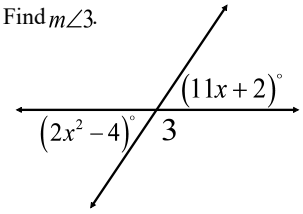
3.1 - Intro to Parallel Lines and Planes

Mental Floss: Tues. Oct 2nd

Find $m\angle 3$.



$2x^2-4=11x+2$

$2x^2-11x-6=0$

$(2x+1)(x-6)=0$

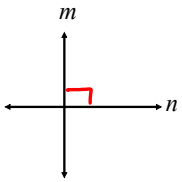
$x=-\frac{1}{2},6$

$11(6)+2=68$

$180-68=112$

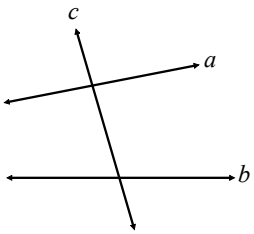
$m\angle 3=112^\circ$

Perpendicular = If two segments, rays, or lines are perpendicular, then they intersect to form right angles.

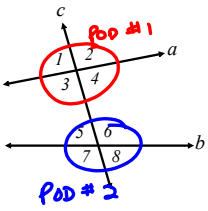


- Line m is perpendicular to line n
- $m \perp n$

Transversal = A line that intersects two or more coplanar lines at different points.



Line c is a transversal intersecting lines a and b.



Corresponding Angles = Angles that are located in corresponding positions.

- SAME LOCATION
- DIFFERENT POD

$\angle 1 \cong \angle 5$ $\angle 3 \cong \angle 7$

$\angle 2 \cong \angle 6$ $\angle 4 \cong \angle 8$

Alternate Interior Angles = Angles that are located inside the two lines ***a*** and ***b*** but on opposite sides of the transversal ***c***.

$\angle 3 \cong \angle 6$ $\angle 4 \cong \angle 5$

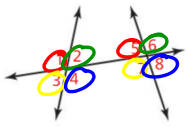
Alternate Exterior Angles = Angles that are located outside the two lines ***a*** and ***b*** but on opposite sides of the transversal ***c***.

$\angle 1 \cong \angle 8$ $\angle 2 \cong \angle 7$

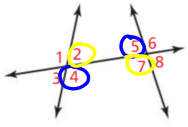
Consecutive Interior Angles = Angles that are located inside the two lines ***a*** and ***b*** but on the same side of the transversal ***c***.

$\angle 3 + \angle 5$ $\angle 4 + \angle 6$

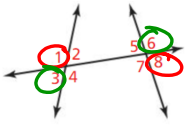
Corresponding



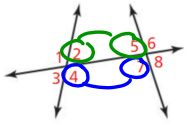
Alternate Interior



Alternate Exterior



Consecutive Interior



Homework

- 3.1 p.129 #1,3-10,21,22,24
- 3.1 p.129 #2,15-18,23,25-28,30,31

- Together:
  - #1-10,15-18,21-28,30,31