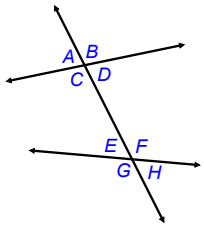
Parallel Lines & Transversals

title

Classify the angle pair relationship.



① $\angle C$ & $\angle F$ Alt Int.

② $\angle B$ & $\angle H$ Consec. Ext.

③ $\angle A$ & $\angle D$ Vertical

④ $\angle G$ & $\angle C$ Corresponding

⑤ $\angle H$ & $\angle A$ Alt Ext

⑥ $\angle E$ & $\angle F$ Linear Pair

⑦ $\angle F$ & $\angle D$ Consec. Int

⑧ $\angle D$ & $\angle G$ None

relationships

PARALLEL lines cut by a transversal

Congruent

corresponding angles

alternate exterior angles

alternate interior angles

Vertical

Supplementary

consecutive exterior angles

consecutive interior angles

none/no name relationship

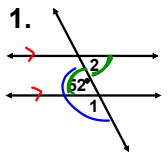
(opposite sides of the transversal, but one angle is between the parallel lines while the other is outside the parallel lines)

Linear pair

congruent or supplementary

Find the m<1 and m<2.

1.



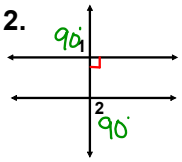
$m\angle 1 + 52^\circ = 180^\circ$

$m\angle 1 = 128^\circ$

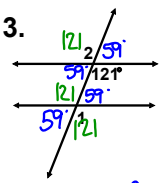
$m\angle 2 = 52^\circ$

alt. int

2.



3.



$180 - 121 = 59^\circ$

$m\angle 1 = 121^\circ$

$m\angle 2 = 121^\circ$

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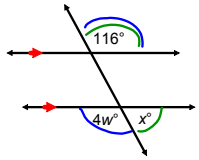
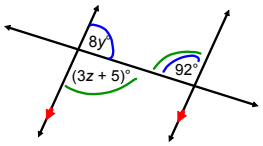
Find the values of the variables.



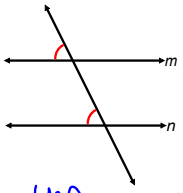
$4w = 116$ $x + 116 = 180$
$w = 29$ $x = 64$



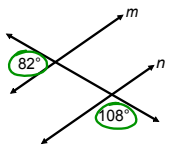
$3z + 5 = 92$
$3z = 87$
$z = 29$
$8y + 92 = 180$
$8y = 88$
$y = 11$

examples

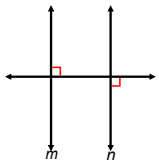
Is it possible to prove that lines *m* and *n* are parallel?



yes
Corresponding $\angle$s are $\cong$



NO
$108 + 82 = 190$
Consec. Ext. are supposed to be 180



YES
They are all Rt $\angle$s

examples

Conclusion

1. **Which angles are congruent?**
   Vert, corresponding, alt int, alt Ext.
2. **Which angles are supplementary?**
   Linear pair, Consec Ext, Consec. Int, Sometimes None
3. **Other Questions?**

Assignment

Parallel lines and Transversals Wkst 1

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Sep 17-10:04 AM