

# Geometry<sup>0809</sup>

## Unit 3 Quiz 1 Review A

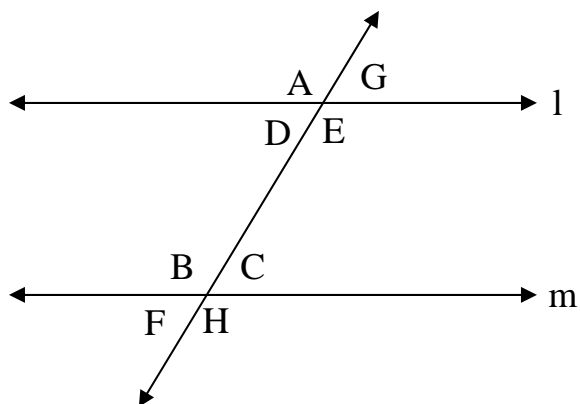
Name:

Date:

Period: 1 2 3 4 5 6

Standards: 7.0

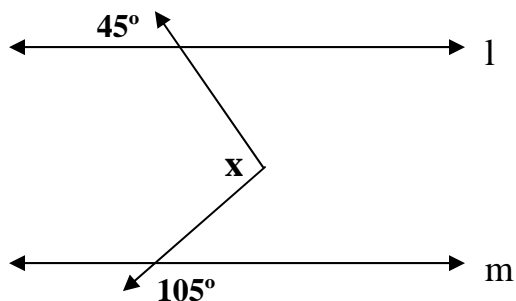
Holt: Ch 3 Transversals



Identify the following angle relationships

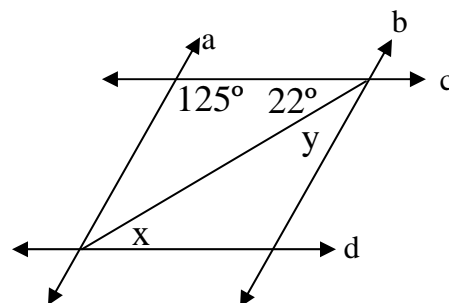
- 1  $\angle B$  and  $\angle H$  are **Vertical  $\angle$ 's**
- 2  $\angle G$  and  $\angle F$  are **Alternate Exterior  $\angle$ 's**
- 3  $\angle D$  and  $\angle E$  are **Linear Pair**
- 4  $\angle C$  and  $\angle E$  are **Consecutive Interior  $\angle$ 's**
- 5  $\angle F$  and  $\angle D$  are **Corresponding  $\angle$ 's**
- 6  $\angle D$  and  $\angle C$  are **Alternate Interior  $\angle$ 's**
- 7  $\angle A$  and  $\angle H$  are **Alternate Exterior  $\angle$ 's**
- 8  $\angle G$  and  $\angle E$  are **Linear Pair**

9 Solve for x



13 Given:  $a \parallel b$  and  $c \parallel d$

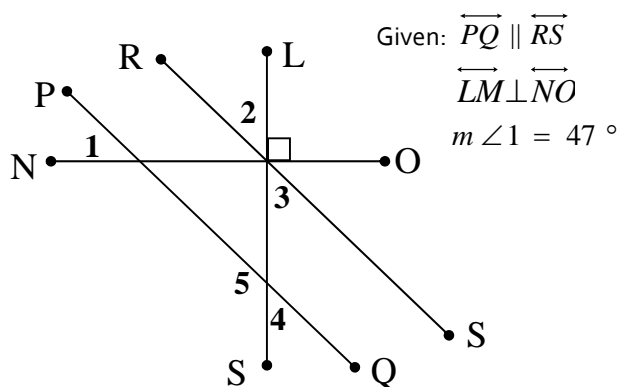
Find the value of the following variables.



10 Solve for angle 2

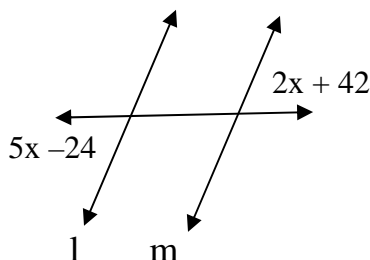
11 Solve for angle 3

12 Solve for angle 4



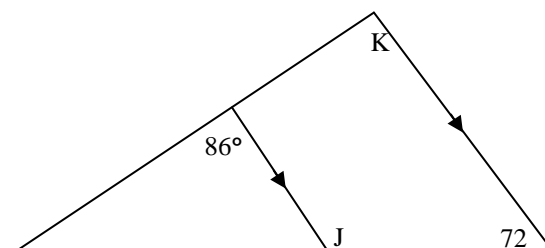
14 Assume that line l and m are parallel.

Solve for x.



15 Find  $\angle J$

16 Find  $\angle K$

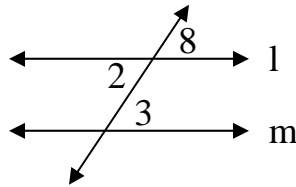


17 Given:  $\angle 2$  and  $\angle 9$  are supplementary  
 $\angle 9$  and  $\angle 7$  are supplementary

Prove:  $\angle 2 \cong \angle 7$

Statements	Reasons
$\angle 2$ and $\angle 9$ are supplementary	Given
$m\angle 2 + m\angle 9 = 180$	Def of supplementary
$\angle 9$ and $\angle 7$ are supplementary	Given
$m\angle 9 + m\angle 7 = 180$	Def of supplementary
$m\angle 2 + m\angle 9 = m\angle 9 + m\angle 7$	Substitution / Transitive
$m\angle 2 = m\angle 7$	Subtraction Prop
$\angle 2 \cong \angle 7$	Def of $\cong$ 's

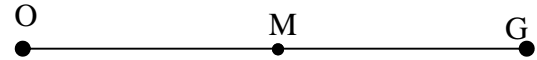
18 Given:  $l \parallel m$   
 Prove:  $\angle 2 \cong \angle 3$



\*\* You may only use the corresponding  $\cong$ 's postulate\*\*

Statements	Reasons
$l \parallel m$	Given
$\angle 3, \angle 8$ are congruent	Corresponding $\angle$ 's
$\angle 8, \angle 2$ are vertical $\angle$ 's	Def of vertical $\angle$ 's
$\angle 8 \cong \angle 2$	Vert postulate
$\angle 2 \cong \angle 3$	Transitive prop

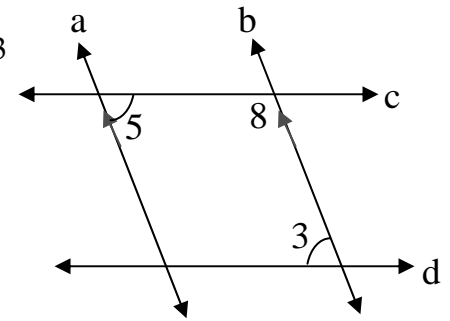
19 Given: M is between O and G  
 $OM = 19$  and  $OG = 38$   
 Prove: M is the midpoint of O and G



Statements	Reasons
M is between O and G	Given
$OM + MG = OG$	Segment Addition Postulate
$OM = 19$	Given
$OG = 38$	Given
$19 + MG = 38$	Substitution
$MG = 19$	Subtraction
$OM = MG$	Transitive Property [or substitution]
M is the midpoint of OG	Definition of Midpoint

20 Given:  $a \parallel b$   
 $\angle 5 \cong \angle 3$

Prove:  $c \parallel d$



Statements	Reasons
$a \parallel b$	Given
$\angle 5, \angle 8$ are supplementary	Consecutive Int. $\angle$ 's Thm
$m\angle 5 + m\angle 8 = 180^\circ$	Def. of supplementary
$\angle 5 \cong \angle 3$	Given
$m\angle 5 = m\angle 3$	Def. of $\cong$ $\angle$ 's
$m\angle 3 + m\angle 8 = 180^\circ$	Substitution
$\angle 3, \angle 8$ are supplementary	Def. of supplementary
$c \parallel d$	Cons. Int. $\angle$ 's Thm Converse