

# Starter

1. Are points L, M and Q collinear?

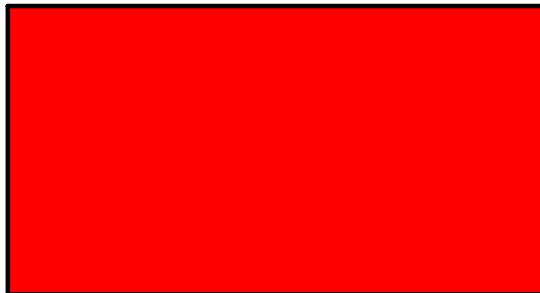
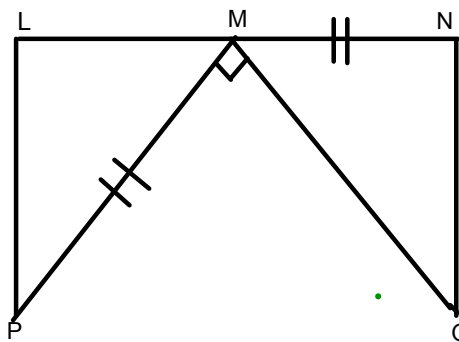
2. Find the measure of  $\overline{MN}$  if  $LM = 5x - 4$ ,  $MN = 6x + 1$ , and  $LN = 30$

3. Can you determine if M is the midpoint of  $\overline{LN}$ ?

4. Name an acute angle, an obtuse angle, and a right angle in the figure

5. Are  $\angle LMP$  and  $\angle NMQ$  complementary??

Refer to Figure:



Answers:

1. No

2.  $MN = 19$

3. No

4. Sample answer:  $\angle QMN$  is acute,  $\angle PMN$  is obtuse, and  $\angle PMQ$  is right.

5. ~~No~~ Yes

Sep 24-1:28 PM

## homework correction

Kuta Similar

1) Not similar

2) Similar (proportional corresponding sides)

3) Similar (proportional corresponding sides)

4) Similar (by angles)

5) Not similar

6) Not similar

13) ? = 22

14) ? = 54

15) ? = 9

16) ? = 11

17)  $x = 8$

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## MATH 8

## Unit 4

## Day 14

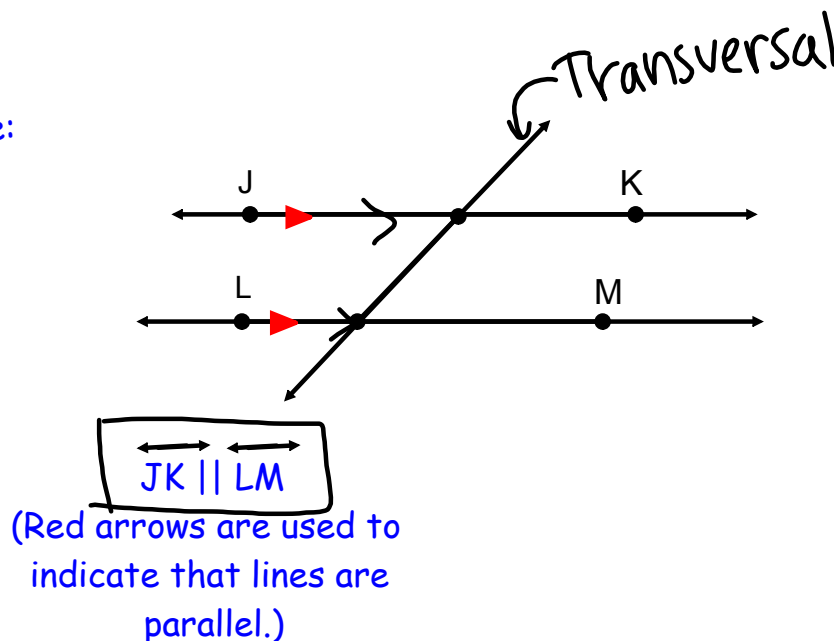
I can ....

Determine the relationship between corresponding angles, alternate interior angles, alternate exterior angles, vertical pairs, and supplementary pairs when parallel lines are cut by a transversal.

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- **Parallel lines** are coplanar lines that do not intersect.
- AT ALL. EVER.

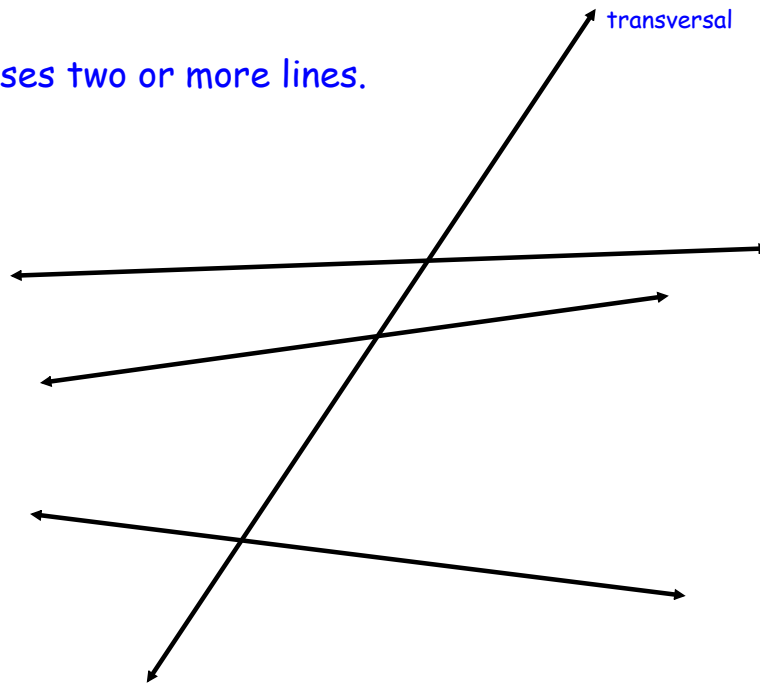
For example:



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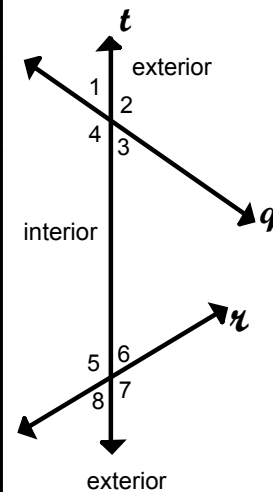
# Transversal

A line that crosses two or more lines.



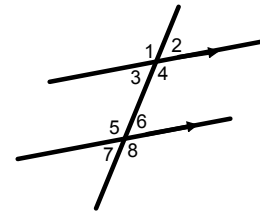
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Transversal Angle Pair Relationships	
Four <b>interior angles</b> lie in the region between lines q and r.	Angles 3, 4, 5, and 6.
Four <b>exterior angles</b> lie in the two regions that are not between lines q and r.	Angles 1, 2, 7, and 8.
<b>Consecutive interior angles</b> are interior angles that lie on the same side of transversal t.	Angles 4 & 5; angles 3 & 6.
<b>Alternate interior angles</b> are nonadjacent interior angles that lie on opposite sides of transversal t.	Angles 3 & 5; angles 4 & 6.
<b>Alternate exterior angles</b> are nonadjacent exterior angles that lie on opposite sides of transversal t.	Angles 1 & 7; angles 2 & 8.
<b>Corresponding angles</b> lie on the same side of transversal t and on the same side of lines q and r.	Angles 1 & 5; angles 2 & 6; angles 3 & 7; angles 4 & 8.



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## Angle and Parallel Lines



Corresponding Angles Postulate - if 2 parallel lines are cut by a transversal, then each pair of corresponding angles are congruent.

Alternate Interior Angle Theorem - If 2 parallel lines are cut by a transversal, then each pair of alternate interior angles are congruent.

Consecutive Interior Angles Theorem - If 2 parallel lines are cut by a transversal, then each pair of consecutive interior angles is supplementary.

Alternate Exterior Angles Theorem - If 2 lines are cut by a transversal, then each pair of alternate exterior angles are congruent.

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Using the figure, classify the relationship between each pair of angles.

a) Angles 5 & 4

consecutive interior angles

b) Angles 2 & 7

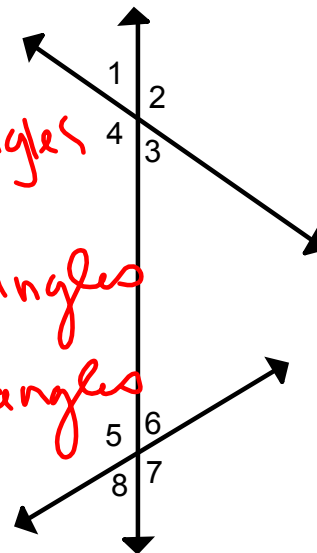
consecutive exterior angles

c) Angles 5 & 1

corresponding angles

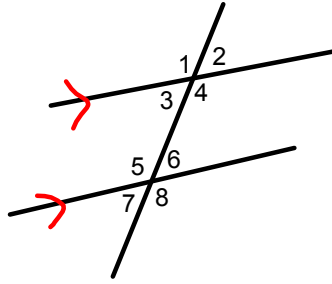
d) Angles 3 & 5

alternate interior angles.



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Refer to figure below to identify the special name for the given angle pair.

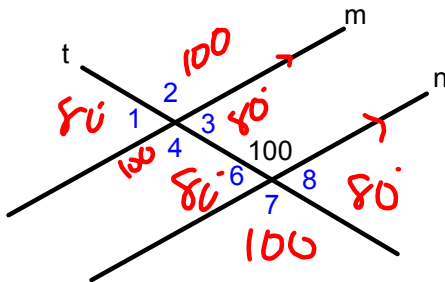


Which ones are congruent?

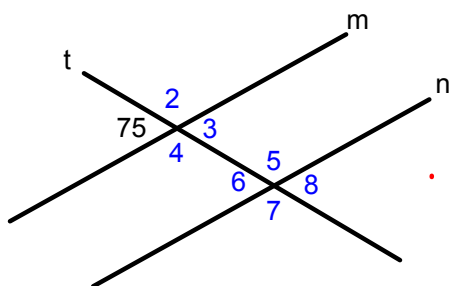
1.  $\angle 1$  and  $\angle 8$
2.  $\angle 4$  and  $\angle 5$
3.  $\angle 3$  and  $\angle 7$
4.  $\angle 3$  and  $\angle 2$
5.  $\angle 3$  and  $\angle 1$
6.  $\angle 6$  and  $\angle 2$

Alternate exterior angles (Y)  
 Alternate interior angles (Y)  
 Corresponding angles (Y)  
 Vertical angles (Y)  
 linear pair (N, supplementary)  
 Corresponding angles (Y)

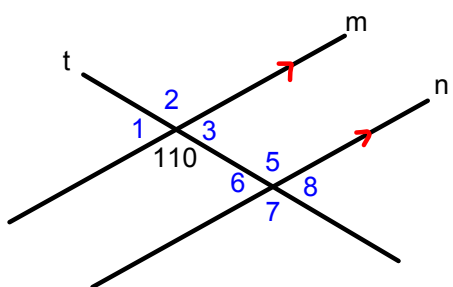
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Dec 19-9:01 AM

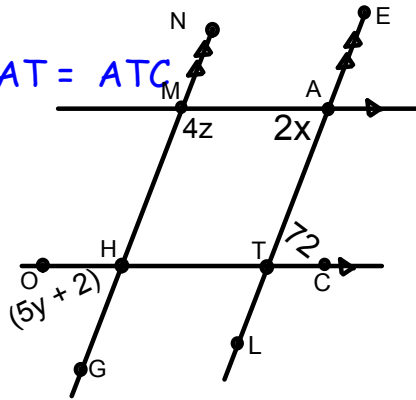


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Find Z Find X



$MAT = ATC$



Find Y

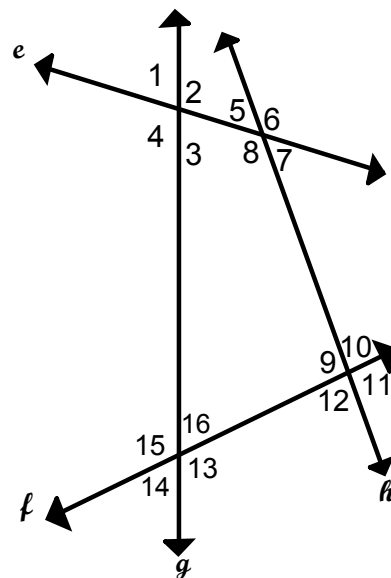
$5y + 2 = 72$



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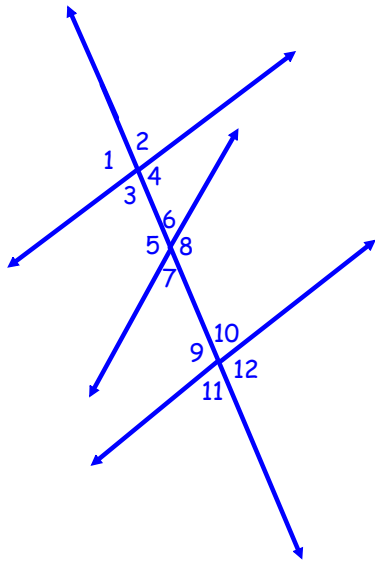
Identify the transversal connecting each pair of angles in the figure to the right. Then classify the relationship between each pair of angles.

- a) Angles 4 & 6
- b) Angles 7 & 10
- c) Angles 15 & 9

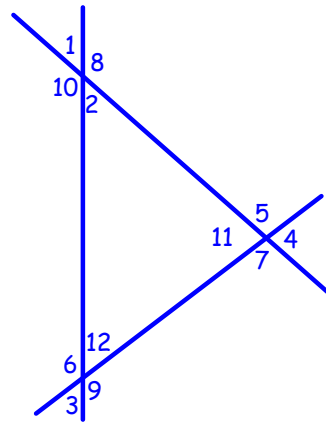


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Name the angle pair relationship



- a)  $\angle 1$  &  $\angle 8$
- b)  $\angle 7$  &  $\angle 10$
- c)  $\angle 8$  &  $\angle 12$
- d)  $\angle 1$  &  $\angle 5$
- e)  $\angle 4$  &  $\angle 6$
- f)  $\angle 8$  &  $\angle 9$



- a)  $\angle 6$  &  $\angle 10$
- b)  $\angle 9$  &  $\angle 11$
- c)  $\angle 1$  &  $\angle 5$
- d)  $\angle 3$  &  $\angle 8$
- e)  $\angle 7$  &  $\angle 12$
- f)  $\angle 4$  &  $\angle 8$

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### Homework

section 5.5  
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