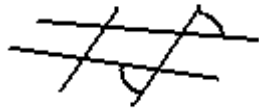


CP Geometry "Jeopardy!" - Unit 3

Terms / Theorems



- 1.) What type of angle pair is illustrated?
- 2.) Define trapezoid.
- 3.) What is a regular polygon?
- 4.) Define "Remote Interior Angles"
- 5.) What is the characteristic of a concave polygon?
- 6.) Define alternate interior angles

Parallel Lines

2.) P-gram  
Find x

3.) Given:  $m \parallel n$   
Find:  $x = ?$

4.) Find x and y

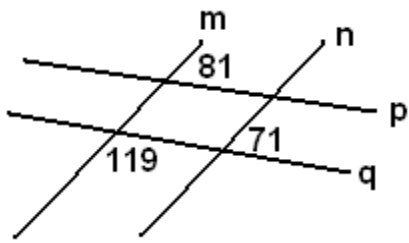
6.) Given:  $p \parallel q$   
 $m \angle 5 = 10x - 5y - 19$   
 $m \angle 8 = 15x + 8y + 5$   
 $m \angle 14 = 12x - 3y + 8$   
 $m \angle 16 = 4x - 15y + 48$

5.) Find: (if possible)

Given:  $m \parallel n$      $A =$      $B =$      $C =$      $D =$      $E =$

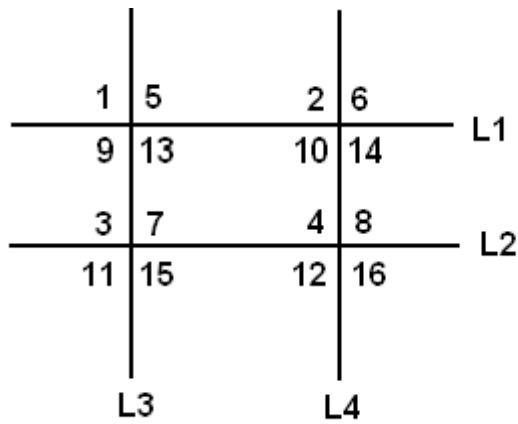
Parallel?

3.)



Which lines are parallel?

5.)



Given:

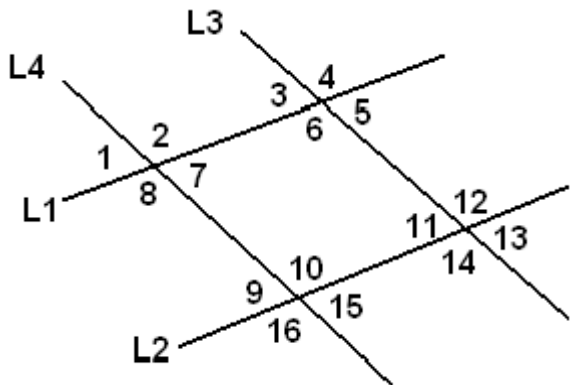
$$\begin{aligned} m\angle 11 &= 8x + 6y + 33 \\ m\angle 2 &= 26x + 18y + 22 \\ m\angle 8 &= 24y - 4x - 22 \\ m\angle 9 &= 10x + 10y + 16 \\ m\angle 7 &= 20y + 2x - 7 \\ m\angle 10 &= 10x + 22y - 36 \end{aligned}$$

Find:

$$\begin{aligned} x &= \\ y &= \end{aligned}$$

Which lines are parallel?  
(if any)

4.)

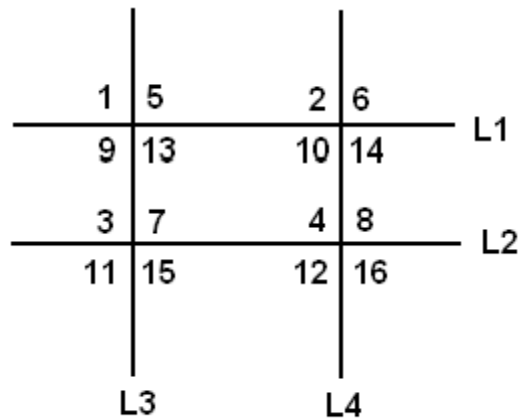


$x =$   
 $y =$  Which lines are parallel?

Given:

$$\begin{aligned} m\angle 2 &= 18x + 15 \\ m\angle 4 &= 21y + 44 \\ m\angle 7 &= 8y + 60 \\ m\angle 10 &= 24y + 24 \\ m\angle 14 &= 12x + 53 \\ m\angle 15 &= 4y + 72 \end{aligned}$$

6.)



Given:

$$\begin{aligned} m\angle 7 &= 15x + 5y + 6 \\ m\angle 8 &= 21x + 3y + 7 \\ m\angle 9 &= 14y - 3x - 9 \\ m\angle 6 &= 18x + 5y + 1 \\ m\angle 14 &= 30x + 3y - 5 \\ m\angle 5 &= 12x + 11y - 28 \end{aligned}$$

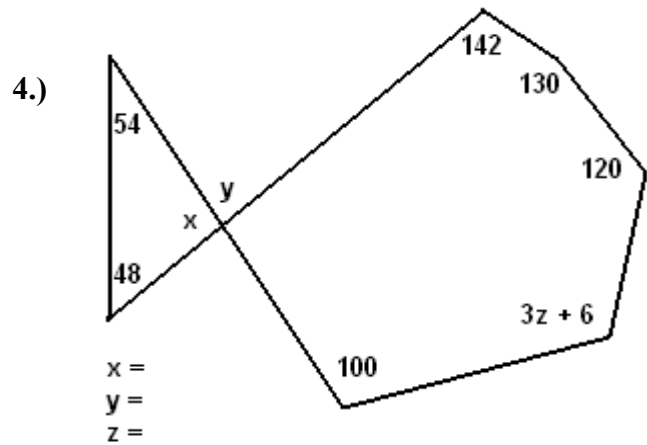
Find:

$$\begin{aligned} x &= \\ y &= \end{aligned}$$

Which lines are parallel?  
(if any)

### Interior Angles

- 1.) Find the sum of the measures of the interior angles in a 1729-gon.
- 2.) The measure of each interior angle in a regular polygon is equal to the measure of each exterior angle. How many sides does the polygon have?
- 3.) The sum of the measures of the interior angles in a polygon is 50,040 degrees. How many sides does the polygon have?
- 5.) Each interior angle in a regular polygon measures 177.5 degrees. If twenty additional sides are added to the figure, how much does the measure of each interior angle increase?
- 6.) Each exterior angle involving a regular polygon is 150 degrees less than the measure of each interior angle. How many sides does this polygon have?



### Exterior Angles

- 2.) What is the sum of the measures of the exterior angles in a regular dodecagon?
- 3.) A regular polygon has 720 sides. What is the measure of each of its exterior angles?
- 4.) A regular polygon has exterior angles that measure 120 degrees. How many sides does it have?
- 6.) A regular polygon has the property that the measures of each of its interior angles is 170.4 degrees more than the measure of each of its exterior angles. How many sides does the polygon have?
- 5.) A regular polygon has exterior angles of measure 26.5 degrees. How many sides does it have?

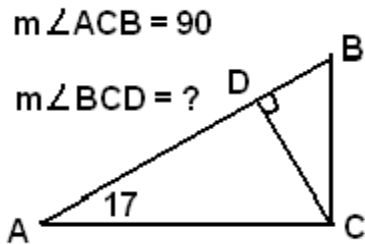
### Figures in the Coordinate Plane

- 3.) Find the midpoint, slope, and length of the segment with endpoints (-5,3) and (-1,8).
- 4.) What is the most specific name for ABCD, where A(-3,2), B(-1,5), C(1,2), and D(-1,-1) are the points?
- 5.) What is the most specific name for ABCD, where A(-1,-1), B(-2,2), C(1,3), and D(2,0) are the points?
- 6.) Find all possible points that form a parallelogram with the three points (1,2), (2,0), and (5,1).

**Transformation Rules**

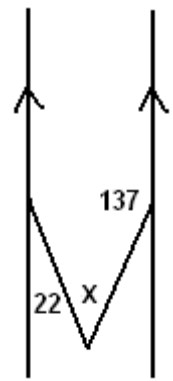
- 1.) What is the rule  $T(x,y)$  for shifting a figure down 3 units and right 18 units?
- 2.) What is the rule  $T(x,y)$  for shifting a figure up 5 units and right 4 units?
- 3.) What is the rule  $T(x,y)$  for reflecting a figure across the x-axis and up 12 units?
- 4.) Explain what the rule  $T(x,y) = (-x + 3, y - 12)$  does to a figure in the plane.
- 5.) Explain what the rule  $T(x,y) = (x + 12, -y - 19)$  does to a figure in the plane.
- 6.) Explain what the rule  $T(x,y) = (-x + 15, -y - 22)$  does to a figure in the plane, in the fewest steps possible!

**"Funky Figures"**



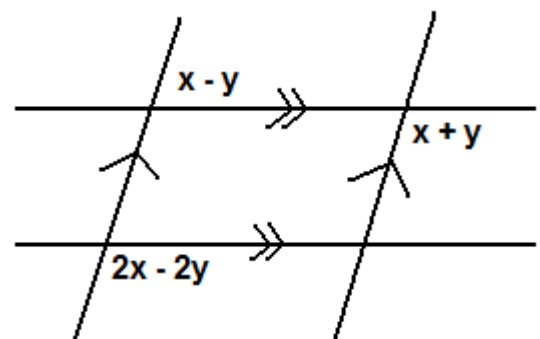
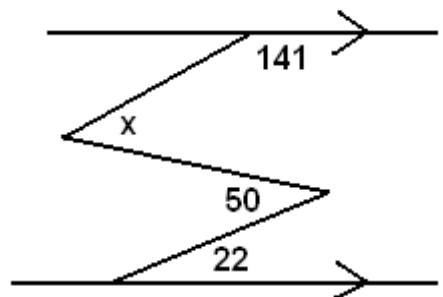
2.)

3.)

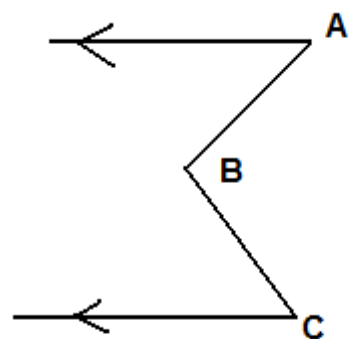


4.)

5.)



6.)



Find:  $x = \underline{\hspace{2cm}}$       $y = \underline{\hspace{2cm}}$

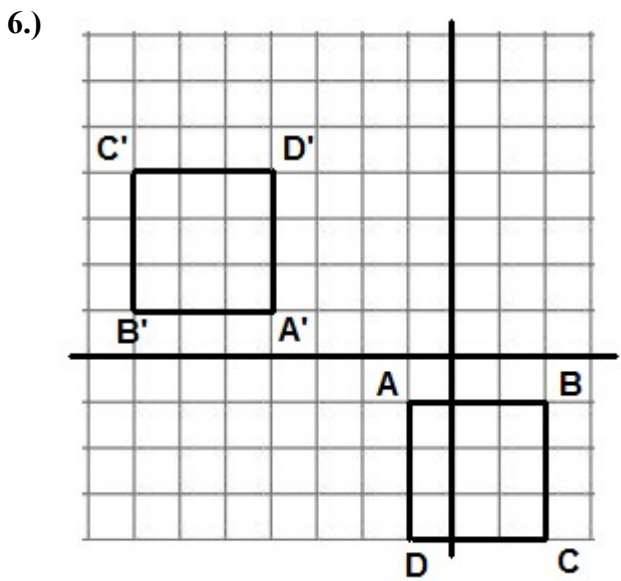
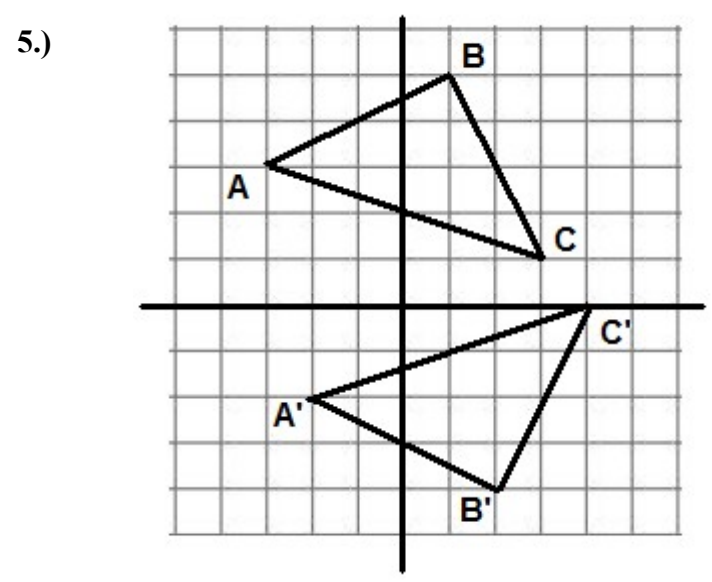
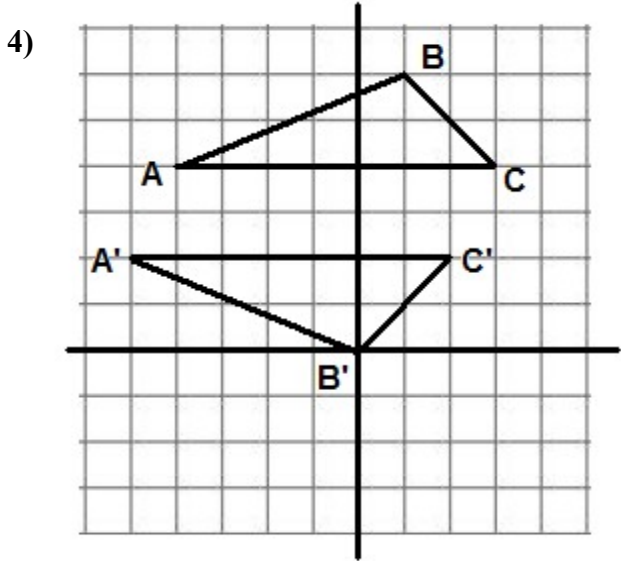
$m\angle A = 2x + 14y - 7$

$m\angle B = 12x + 28y - 52$

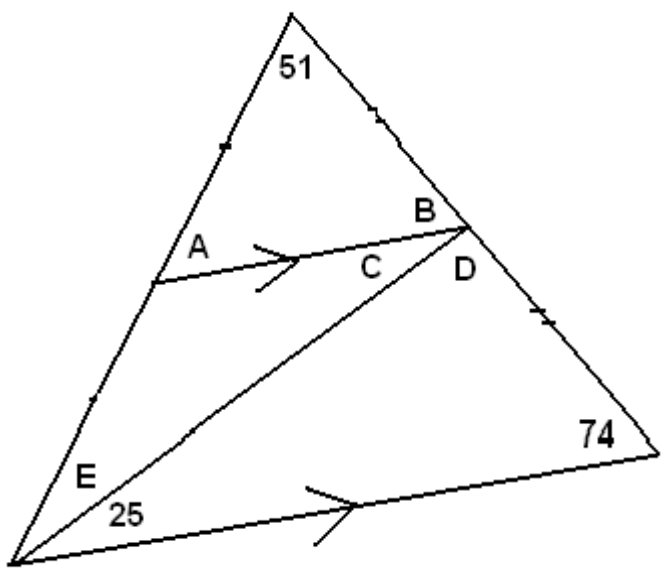
$m\angle C = 7x + 5y - 3$

$m\angle A$  is 4 degrees more than  $m\angle C$

Transformation Pictures

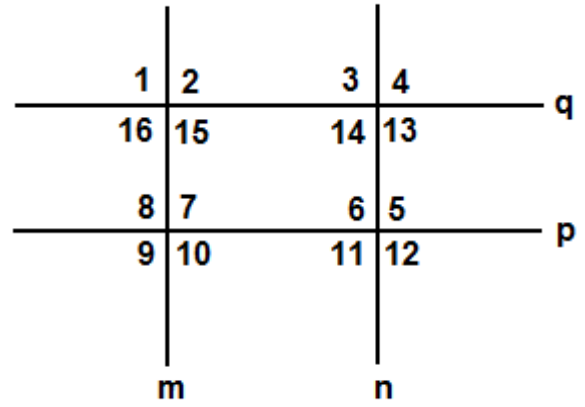


Random!



### Form Equations

3.)  $m < 2, m < 9, m < 4, m < 12$   
 $m \parallel n$



4.)  $m < 2, m < 9, m < 4, m < 12$   
 $p \parallel q$

5.)  $m < 16, m < 7, m < 14, m < 12$   
 $p \parallel q$

6.)  $m < 5, m < 8, m < 14, m < 15$   
 $m \parallel n$