Good morning!

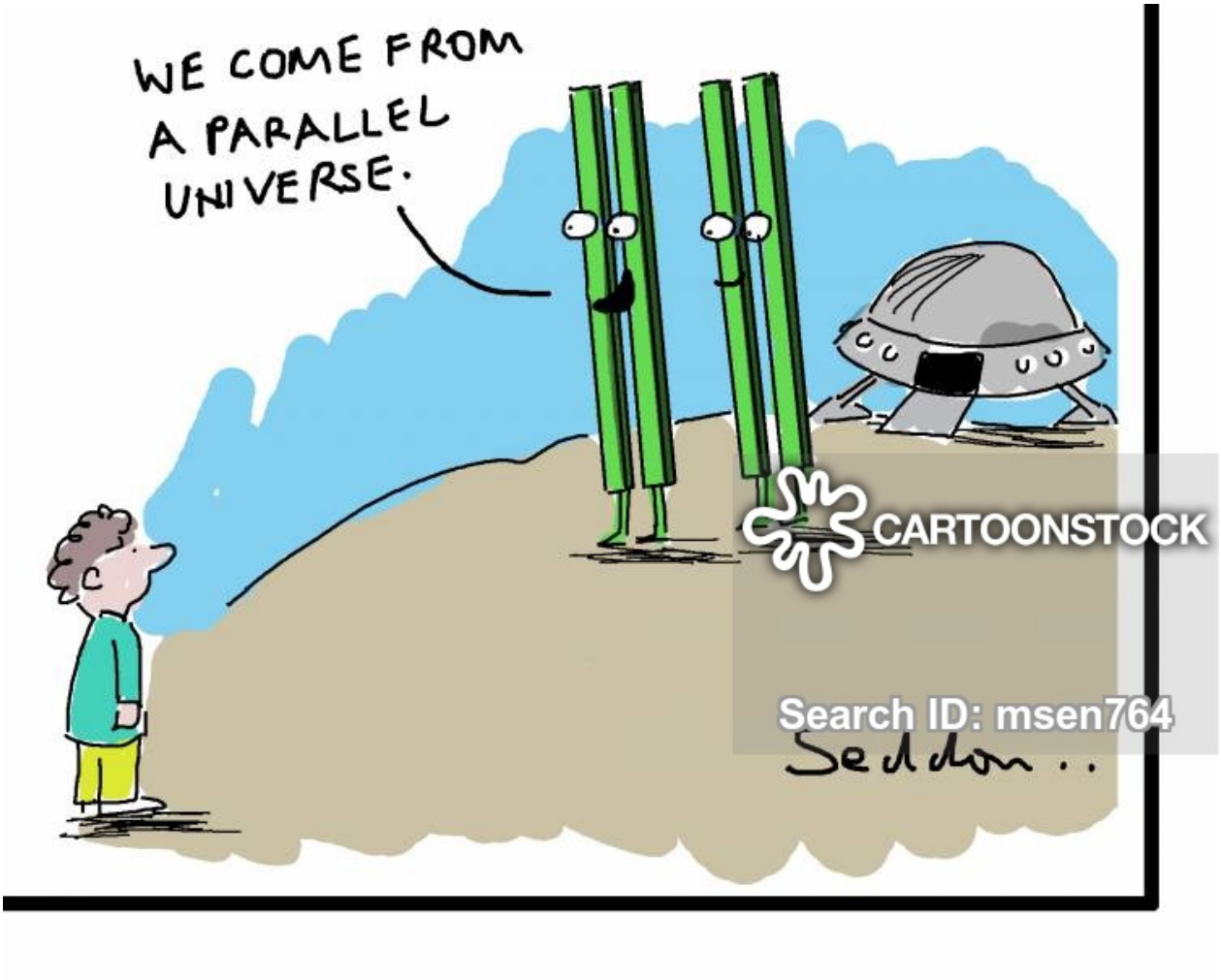
1. "Here"

2. Notes on Parallel Lines

3. Parallel Practice to CTLS

DeltaMath is extended with another assignment, both due Monday 8:00 AM

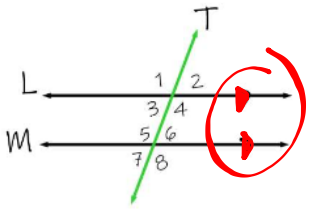

Never touch
Parallel


WE COME FROM A PARALLEL UNIVERSE.
CARTOONSTOCK
Search ID: msen764
Seldon..

Parallel Lines Cut by a Transversal

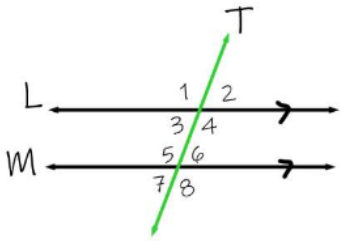
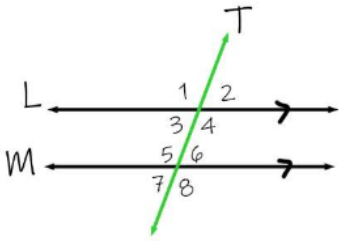
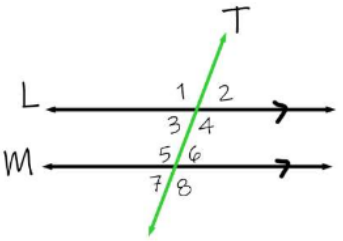
What does it mean to be parallel? Lines in the same plane (2D space), that never intersect.

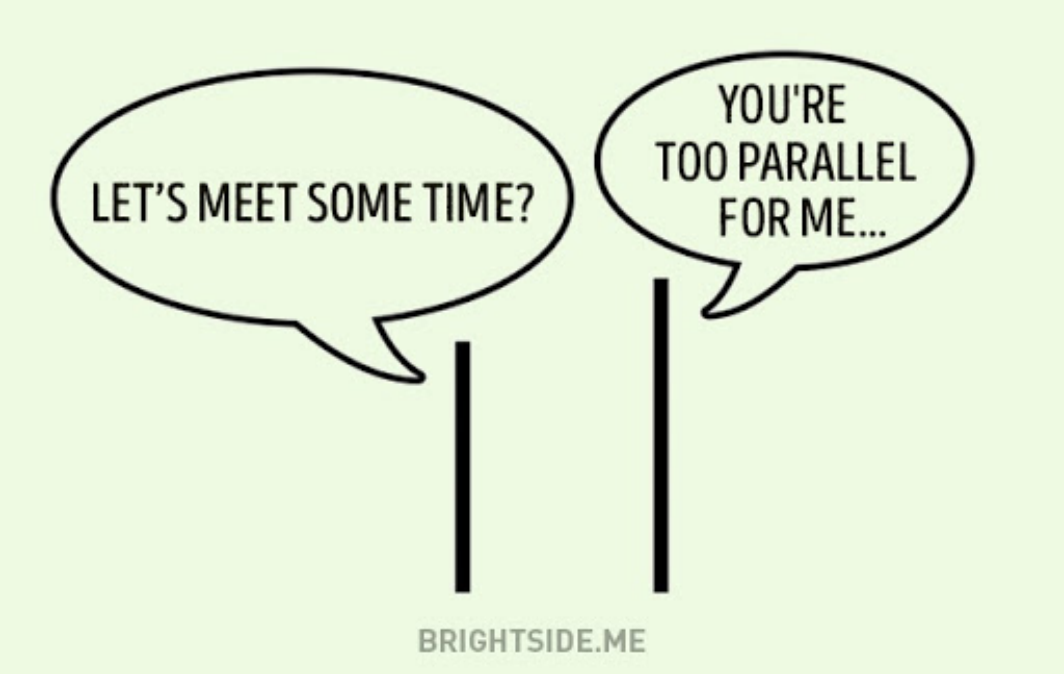
Notation: In the diagram to the right, we use the notation line "L || M," to say that lines "L" is parallel to line "M." The extra arrows on L and M also denote that the lines are parallel.

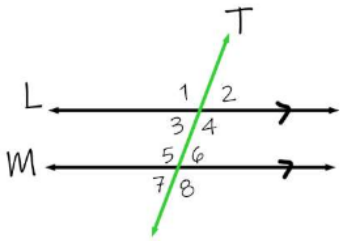
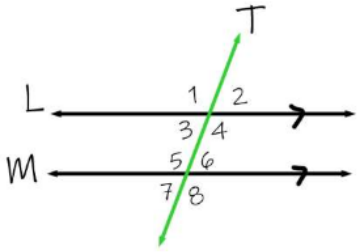


What is a transversal? A transversal is a line that "transverses" or cuts through other line. Line "T" is the transversal because is cuts through L and M. Where the **transversal** intersects the parallel line, angles are created.

Angle Relationships:

Corresponding Angles In the same location on different parallel lines. They are always congruent. Equation: angle = angle		Examples: ∠1 & ∠5 ∠2 & ∠6 ∠3 & ∠7 ∠4 & ∠8
Alternate Interior Opposite sides of the transversal, within lines L and M. They are always Congruent. Equation: angle = angle		Examples: ∠3 & ∠6 ∠4 & ∠5
Alternate Exterior Opposite sides of the transversal, outside lines L and M. They are always congruent. Equation: angle = angle		Examples: ∠1 & ∠8 ∠2 & ∠7

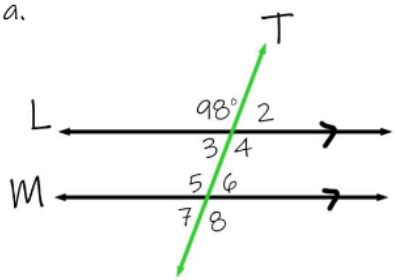

LET'S MEET SOME TIME?
YOU'RE TOO PARALLEL FOR ME...
BRIGHTSIDE.ME

Same Side Interior Same side of the transversal, within lines L and M. They are always supplementary. Equation: Angle + Angle = 180		Examples: ∠3 & ∠5 ∠4 & ∠6
Same Side Exterior Same side of the transversal, Outside lines L and M. They are always supplementary. Equation: Angle + Angle = 180		Examples: ∠1 & ∠7 ∠2 & ∠8

You Try!

1. Given the measure of one angle, find all the other angles:

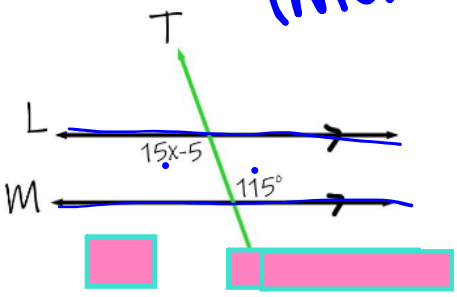
a.



∠2 = 82
∠3 = 82
∠4 = 98
∠5 = 98
∠6 = 82
∠7 = 82
∠8 = 98

b. Solve for x.

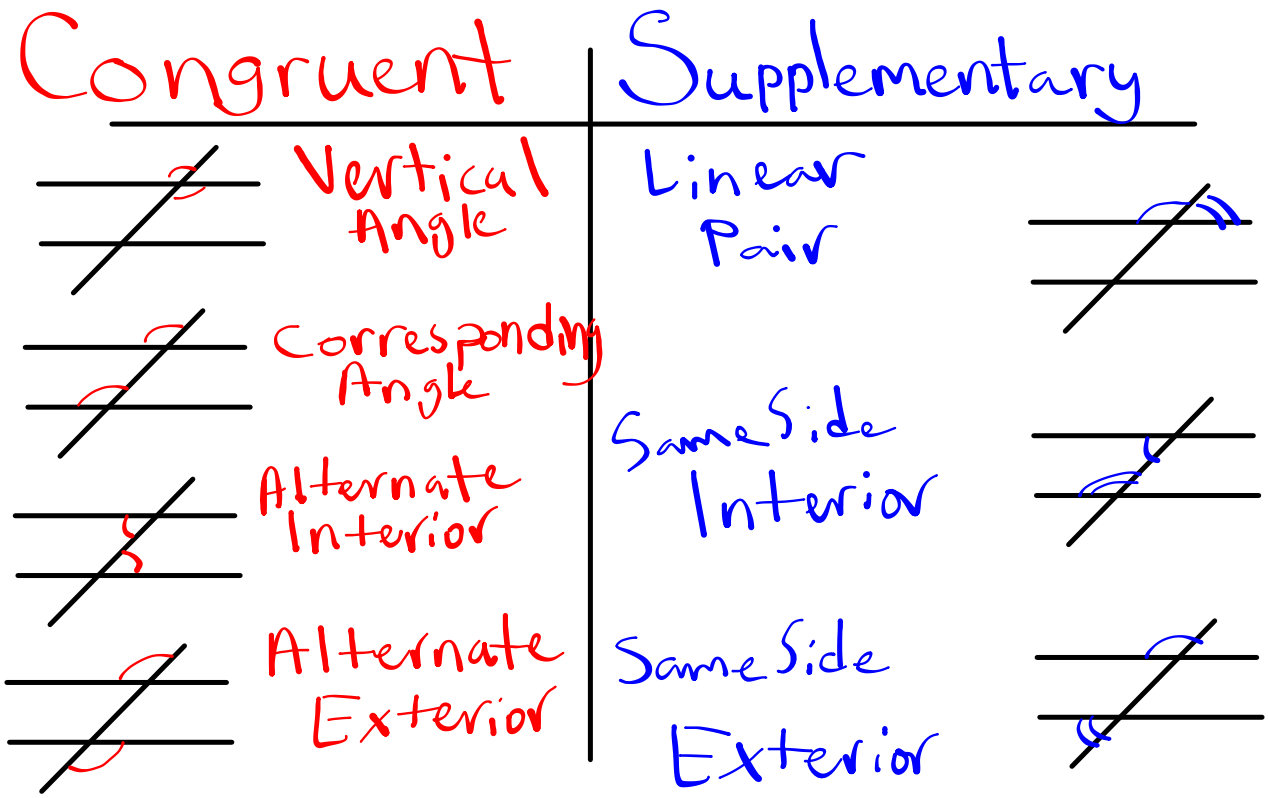
Alternate Interior



x = 8

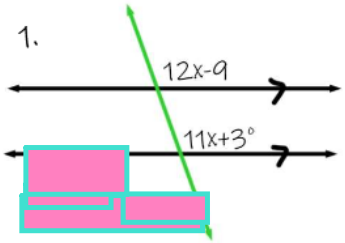
Alt. Interior
15x − 5 = 115


PARALLEL PARKING
YOU'RE DOING IT WRONG
quickmeme.com


Congruent
Supplementary
Vertical Angle
Linear Pair
Corresponding Angle
Same Side Interior
Alternate Interior
Alternate Exterior
Same Side Exterior

More Practice!: Name the angle relationship, then solve for x.

1.

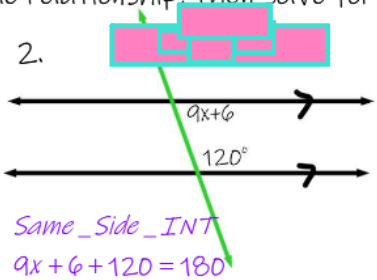


Corresponding

$12x - 9 = 11x + 3$

$x = 12$

2.

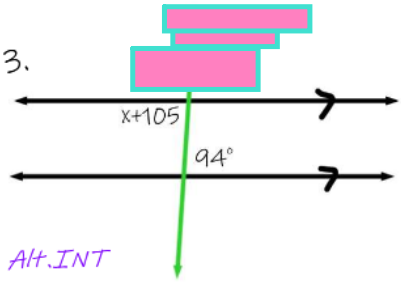


Same_Side_INT

$9x + 6 + 120 = 180$

$x = 6$

3.

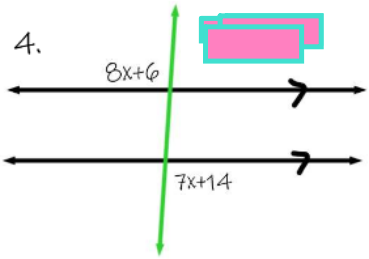


Alt.INT

$x + 105 = 94$

$x = -11$

4.

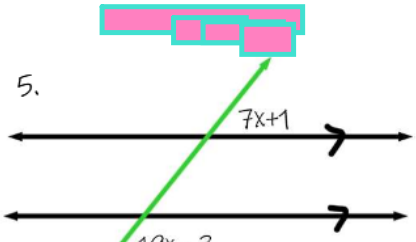


Alt.EXT

$8x + 6 = 7x + 14$

$x = 8$

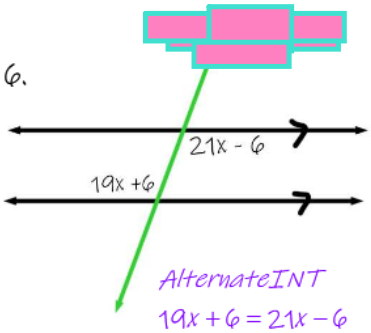
5.



Same_Side_EXT

$7x + 1 + 19x - 3 = 180$

6.



AlternateINT

$19x + 6 = 21x - 6$

$12 = 2x$

$x = 6.$

CHALLENGE SECTION: Multiple transversals. HINT: Follow one transversal at a time.

∠1 = ∠2 =

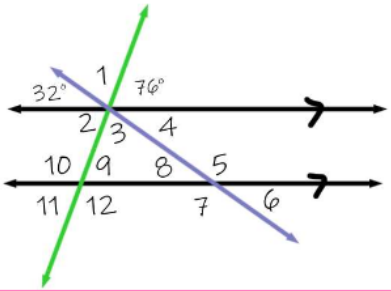
∠3 = ∠4=

∠5= ∠6=

∠7= ∠8=

∠9 = ∠10 =

∠11 = ∠12=



Parallel Lines Practice

1. Find the measures of all the numbered angles:

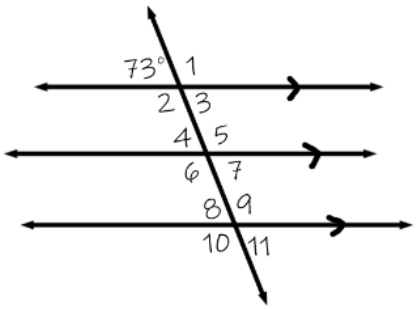
∠1 = ∠2 =

∠3 = ∠4=

∠5= ∠6=

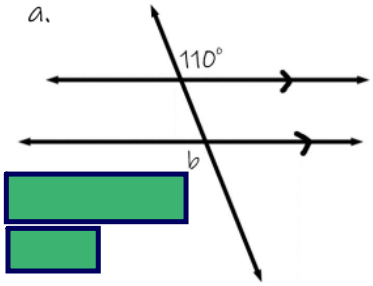
∠7= ∠8=

∠9 = ∠10 = ∠11 =

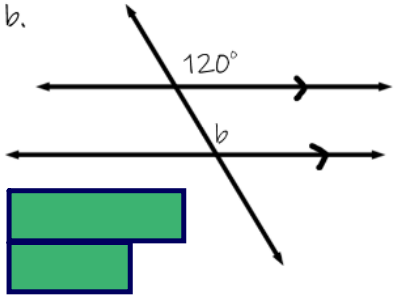


2. Name the angle relationship, and find the measure of angle b.

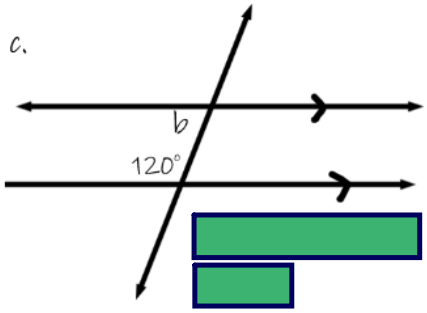
a.



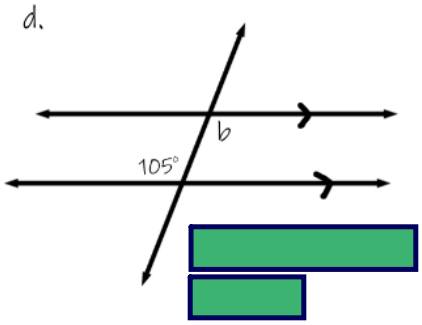
b.



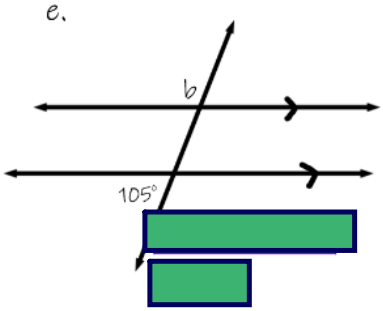
c.



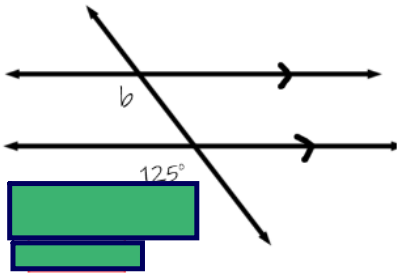
d.



e.

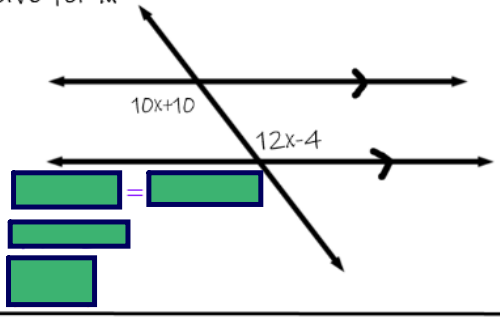


f.

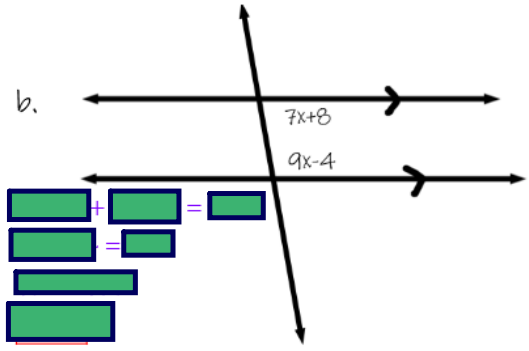


3. Solve for x.

a.

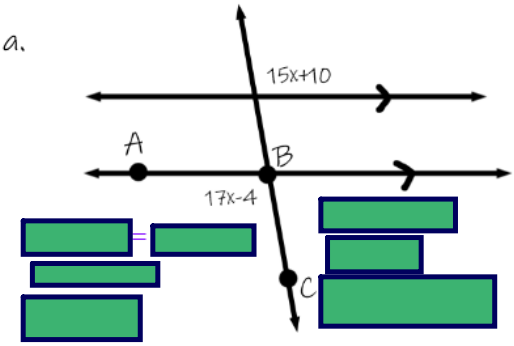


b.

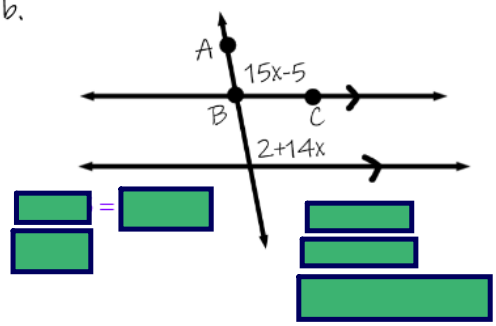


4. Find the measure of ∠ABC in each diagram.

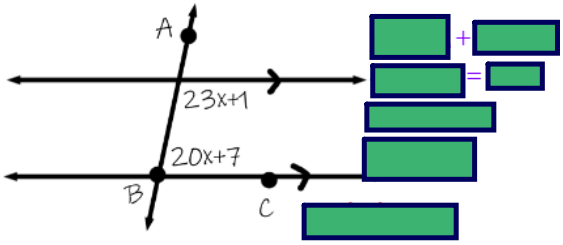
a.



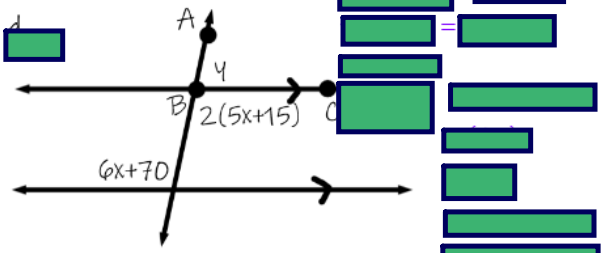
b.



c.

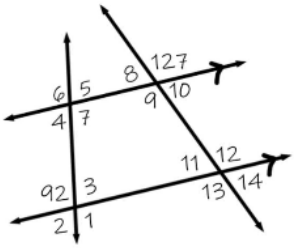


d.



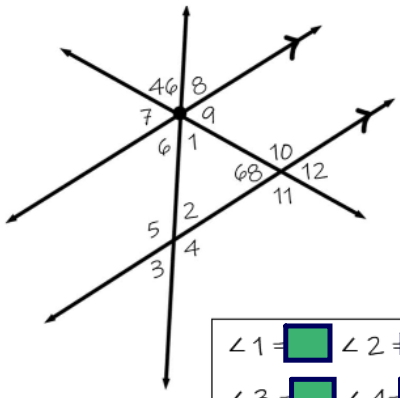
CHALLENGE SECTION:

5.



∠1 = ∠2 =
∠3 = ∠4=
∠5= ∠6=
∠7= ∠8=
∠9 = ∠10 =
∠11 = ∠12 =
∠13 = ∠14=

6.



∠1 = ∠2 =
∠3 = ∠4=
∠5= ∠6=
∠7= ∠8=
∠9 = ∠10 =
∠11 = ∠12 =