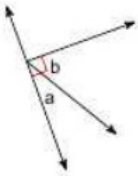
Number Systems and Lines Unit Name_____

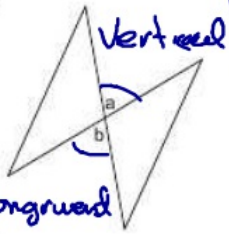
Day 3 INCLASS

Period____

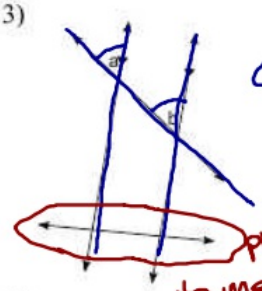
Name the relationship: linear pair, vertical, adjacent, alternate interior, alternate exterior, corresponding, or consecutive interior. AND state whether they are congruent, supplementary or complementary.

1) 

Adjacent
Complentary

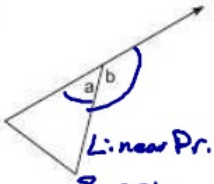
2) 

Vertical
Congruent

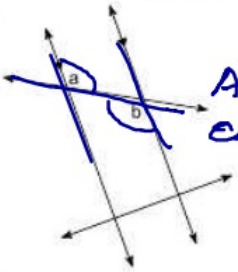
3) 

Corresponding.
Congruent.

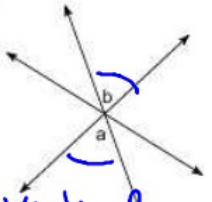
placed in here to mess you up!

4) 

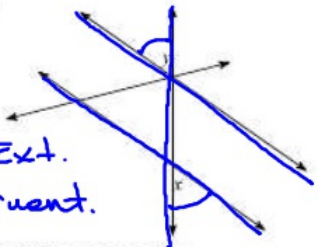
Linear Pr.
Suppl.

5) 

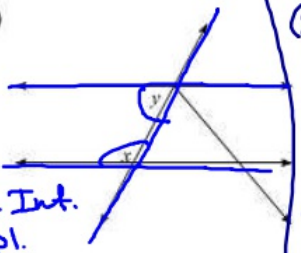
Alt. Int.
Congruent. ≅

6) 

Vertical
Congruent.

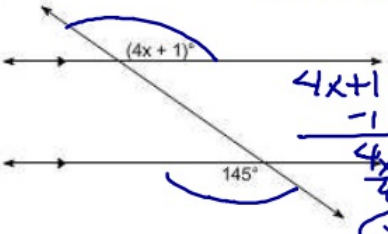
7) 

Alt. Ext.
Congruent.

8) 

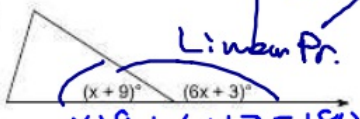
Cons. Int.
Suppl.

Find the value of x.

9) 

Alt. Ext.

$4x+1 = 145$
$-1 \quad -1$
$\frac{4x}{4} = \frac{144}{4}$
$x = 36$

10) 

Linear Pr.

$x+9+6x+3=180$
$7x+12=180$
$-12 \quad -12$
$7x = 168$
$x = 24$

Linear Pair

Vertical ∠'s

Adjacent ∠'s

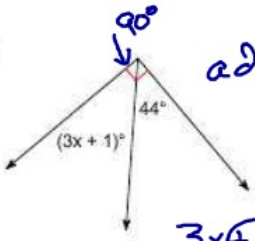
Alt. Int.

Alt. Ext

Corresponding (Same position)

Cons. Int.

11)



adj.

$3x+1+44=90$

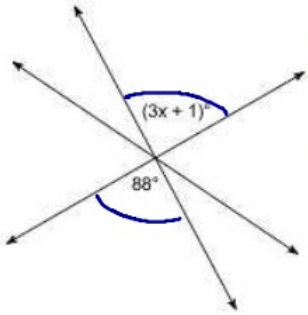
$3x+45=90$

$-45 \quad -45$

$3x=45$

$x=15$

12)



Vertical ∠'s

$3x+1=88$

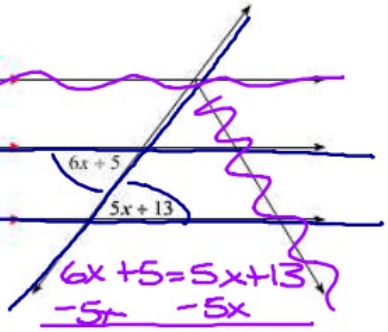
$-1 \quad -1$

$\frac{3x}{3}=\frac{87}{3}$

$x=29$

Name the angle relationship. Then find the measure of both angles indicated.

13)



$6x+5=5x+13$

$-5x \quad -5x$

$x+5=13$

$-5 \quad -5$

$x=8$

$6(8)+5$

$48+5$

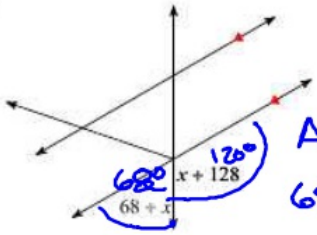
$53°$

$5(8)+13$

$40+13$

$53°$

14)



Adjacent

$68+x+x+128=180$

$2x+196=180$

$68+x \quad x+128$

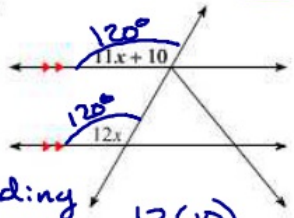
$68+-8 \quad -8+128$

$60°, 120°$

$\frac{2x}{2}=\frac{-16}{2}$

$x=-8$

15)



Corresponding

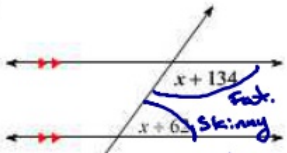
$11x+10=12x$

$10=x$

$12(10)$

$120°, 120°$

16)



Cons. Int.

Fat.

Skinny

$x+134+x+62=180$

$2x+196=180$

$x+62 \quad x+134$

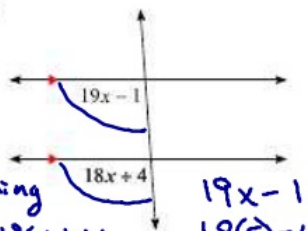
$-8+62 \quad -8+134$

$54°, 126°$

$2x=-16$

$x=-8$

17)



Corresponding

$19x-1=18x+4$

$-18x \quad -18x$

$x-1=4$

$x=5$

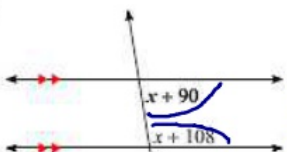
$19x-1$

$19(5)-1$

$95-1$

$94°, 94°$

18)



Cons. Int.

$x+90+x+108=180$

$2x+198=180$

$x+90 \quad x+108$

$-9+90 \quad -9+108$

$81°, 99°$

$2x=-18$

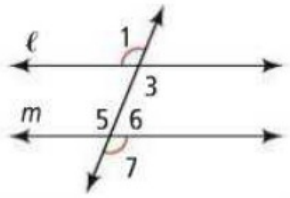
$x=-9$

PROVE IT!! :)

How do we prove lines are parallel?
Use definitions (examples: definition of corresponding angles, definition of supplementary angles)
Organize your justifications in a t-table with statements and reasons.

19) Use the picture provided to the right to answer the following question.

Given: $\angle 1 \cong \angle 7$
Prove: $\ell \parallel m$

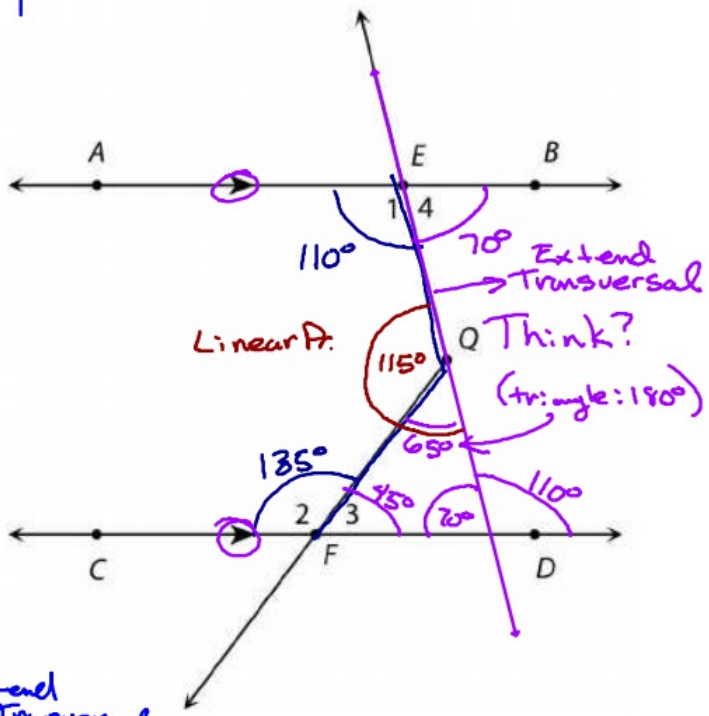


Statements	Reasons
1. $\angle 1 \cong \angle 7$	1. Given
2. $\angle 1$ and $\angle 7$	2. Alt Ext. Angles
3. Alt. Ext $\cong$ congruent	3. def Parallel lines
4. ℓ and m	4. Parallel.

Use the picture to the right to answer the following questions:

20) If $m\angle 1 = 110°$ and $m\angle 2 = 135°$, find $m\angle EQF$. = 115°

21) If $m\angle 1 = 125°$ and $m\angle 3 = 42°$, find $m\angle EQF$. = 97°



Same process.