Homework: Parallels Cut by a Transversal

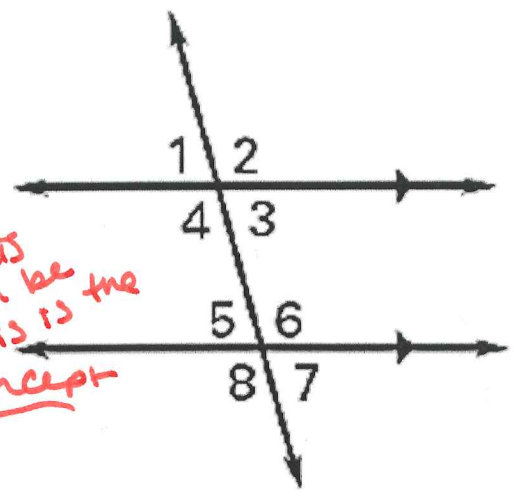Directions: Use the figure to compete the following:
1. Highlight the transversal
2. Name the parallel lines n and k

Directions: Use the figure to name the relationship between the two angles.
   You must use only the following relationships:
      Corresponding angles are congruent
      Alternate interior angles are congruent
      Alternate exterior angles are congruent
   Consecutive interior angles are supplementary
      Linear pairs are supplementary
      Vertical angles are congruent

If kids don't have this NO points can be earned. This is the New concept

3. Angles 5 and 3

alt. int ∠s are ≅

4. Angles 1 and 7

alt. Ext. ∠s are ≅

5. Angles 8 and 4

Corresponding ∠s are ≅

6. Angles 6 and 3

consecutive int ∠s are suppl.

Directions: Use the figure to name the relationship between the two angles assuming the two lines are parallel and find the measure of the angles.

7. If m < 2 = 113°, what is m < 6?

m<6 = __113°__

Because: __corr. ∠s are ≅__

8. If m < 4 = 100°, what is m < 6?

m<6 = __100°__

Because: __alt. int ∠s are ≅__

9. If m < 1 = 84°, what is m < 3?

m<3 = __84°__

Because: __Vertical ∠s are ≅__

10. If m < 7 = 75°, what is m < 1?

m<1 = __75°__

Because: __alt. Ext. ∠s are ≅__

11. If m < 3 = 81°, what is m < 6?

m<6 = __99°__

Because: __Cons. int ∠s are suppl.__

12. If m < 6 = 111°, what is m < 3?

m<3 = __69°__

Because: __con. int ∠s are suppl.__

13. If $p \parallel q$ and $m\angle 1 = 75°$, find the measures of <u>all</u> the angles formed by the parallel lines cut by the transversal.
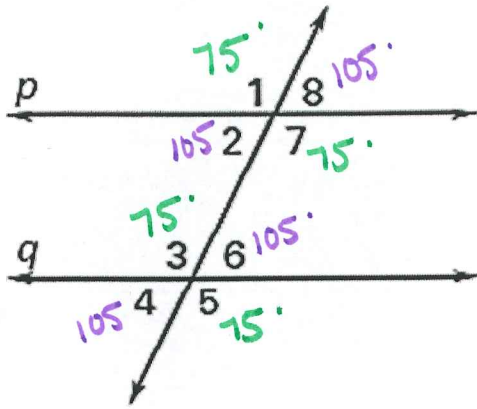
$m\angle 1 = 75°$ $m\angle 2 = 105°$

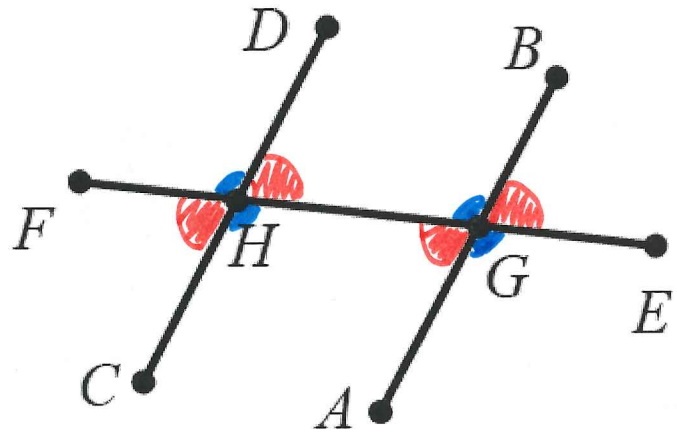$m\angle 3 = 75°$ $m\angle 4 = 105°$

$m\angle 5 = 75°$ $m\angle 6 = 105$

$m\angle 7 = 75°$ $m\angle 8 = 105°$

Directions:
If DC and BA are parallel, state if the angles are congruent or supplementary and why.

14. <DHG and <HGA $\cong$
   alt int <s are $\cong$

15. <FHC and <DHG $\cong$
   Vertical <s are $\cong$

16. <BGE and <FHC $\cong$
   alt. Ext. <s are $\cong$

17. <EGA and <GHC $\cong$
   corresponding <s are $\cong$

18. <AGH and <EGA Suppl.
   linear pairs are suppl.