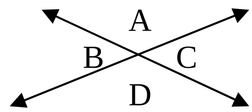
Name_______________

Reteaching Page
7.3 – Angle Relationships

When two lines intersect, pairs of opposite angles (**vertical angles**) are formed. Vertical angles have the same measure which means they are congruent.

- < A and < D are vertical angles. These angles are congruent.
- < B and < C are vertical angles. These angles are congruent.

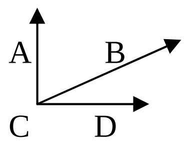


When angle share a common side, they are called **adjacent**.

- < A and < C share a side. These angles are adjacent.
- < B and < D share a side. These angles are adjacent.

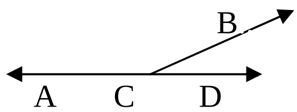
Sometimes adjacent angles form a right angle or a straight angle. Because right angles and straight angles have a given measure these types of adjacent angles are special.

Complementary angles form a right angle.



- Look at the figure on the right.
- < ACB and < BCD share a side.
- Since < ACD is 90^o, we call < ACB and < BCD complementary angles.
- This is important because if you know one angle measure, you can use math to find the measure of the other angle.
  - Let's say that < DCB measures 30^o. You can figure out that < ACB measures 60^o.
  - Together < DCB (30^o)+ < ACB (60^o) = < ACD (90^o)

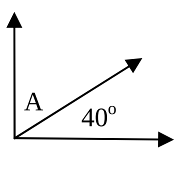
Supplementary angles form a straight angle.



- Look at the figure on the right.
- < ACB and < BCD share a side.
- Since < ACD is 180^o, we call < ACB and < BCD supplementary angles.
- This is important because if you know one angle measure, you can use math to find the measure of the other angle.
  - Let's say that < DCB measures 40^o. You can figure out that < ACB measures 140^o.
  - Together < DCB (40^o)+ < ACB (140^o) = < ACD (180^o)

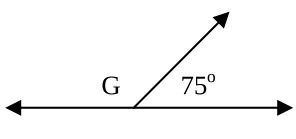
Identify the measures of following angles.

< a = ___________



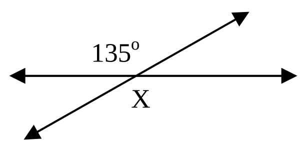
90 – 40 = ____

< G = ___________



180 – 75 = ____

< X = ___________

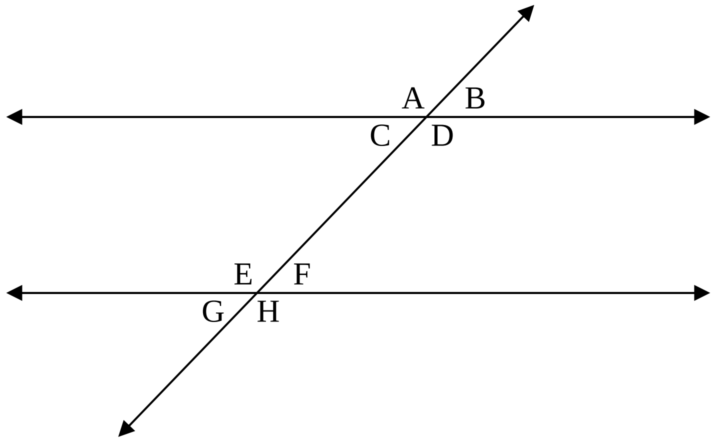


Name_______________

Reteaching Page

7.3 – Angle Relationships

When two parallel lines are cut by a **transversal** several pairs of special angles are formed.



You should notice right away that we have formed **several pairs** of supplementary angles.
We also have plenty of vertical angles – and as you know vertical angles are always congruent!

In addition we have created more special angles.

Alternate interior angles

- Interior means inside – so the interior angles are < C, < D, < E and < F.
- Interior angles that are across the transversal are called **alternate interior angles**.
    - < C and < F are **alternate interior angles** – look at them – you can see they are **congruent.**
    - < E and < D are **alternate interior angles** – look at them – you can see they are **congruent.**

Alternate exterior angles

- Exterior means outside – so the exterior angles are < A, < B, < G and < H.
- Exterior angles that are across the transversal are called **alternate Exterior angles**.
    - < A and < H are **alternate exterior angles** – look at them – you can see they are **congruent.**
    - < B and < G are **alternate exterior angles** – look at them – you can see they are **congruent.**

Corresponding angles

- If you examine the figure you will see that the transversal creates 2 matching figures.
    - The angles A, B, C and D **correspond** (or match) with the angles E, F, G and H.
- Corresponding angles are **congruent** because they are the twin of an angle in the other figure.
    - < A matches < E, they are corresponding and congruent.
    - < B matches < F, they are corresponding and congruent.
    - < C matches < G, they are corresponding and congruent.
    - < D matches < H, they are corresponding and congruent.