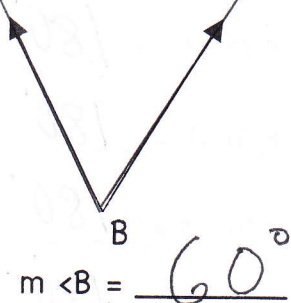


Pair Discovery - Angles and Parallel Lines

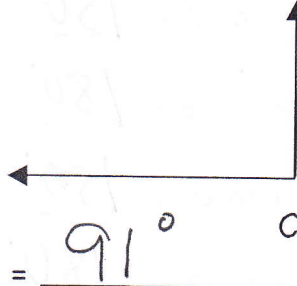
Name KEY

Using a protractor, find the measure of the following angles.

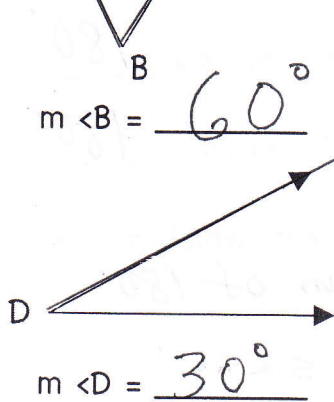
1.



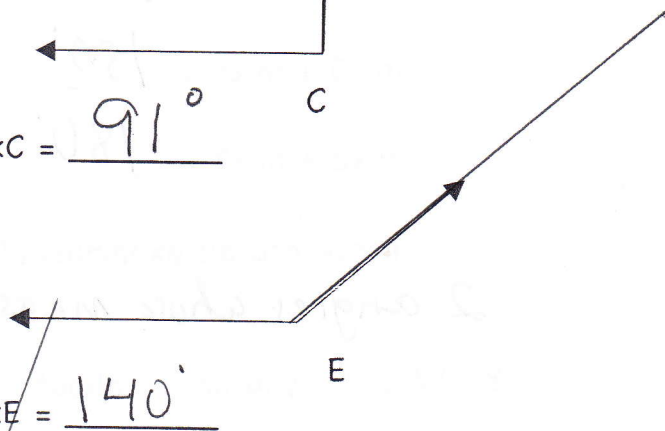
2.



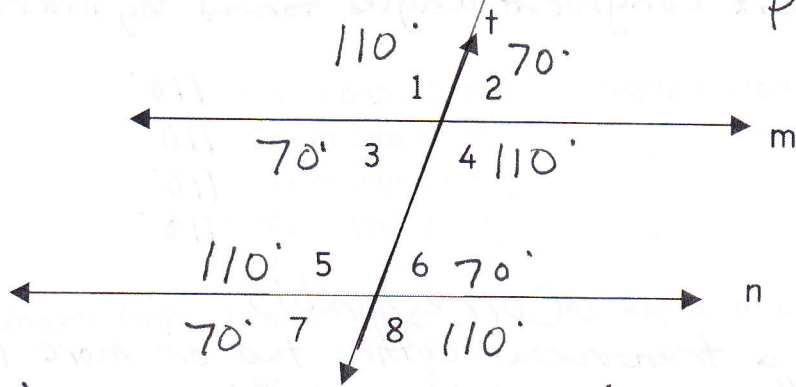
3.



4.



5. Lines m and n are parallel ($m \parallel n$) which means: Lines in a plane that do not intersect
 Line t is a transversal which means: line that intersects 2 or more parallel lines.



$m \angle 1 = \underline{110^\circ}$ $m \angle 2 = \underline{70^\circ}$ $m \angle 3 = \underline{70^\circ}$ $m \angle 4 = \underline{110^\circ}$

$m \angle 5 = \underline{110^\circ}$ $m \angle 6 = \underline{70^\circ}$ $m \angle 7 = \underline{70^\circ}$ $m \angle 8 = \underline{110^\circ}$

6. Using the picture on the previous page (#5), answer the following questions.

$m \angle 1 \cong$ (is congruent to) $\angle \underline{4}$, $\angle \underline{5}$, $\angle \underline{8}$

$m \angle 2 \cong \angle \underline{3}$, $\angle \underline{6}$, $\angle \underline{7}$

congruent to means: having the same size and shape

7. Try these:

$$m \angle 1 + m \angle 2 = \underline{180^\circ}$$

$$m \angle 2 + m \angle 4 = \underline{180^\circ}$$

$$m \angle 4 + m \angle 3 = \underline{180^\circ}$$

$$m \angle 3 + m \angle 1 = \underline{180^\circ}$$

$$m \angle 5 + m \angle 6 = \underline{180^\circ}$$

$$m \angle 6 + m \angle 8 = \underline{180^\circ}$$

$$m \angle 8 + m \angle 7 = \underline{180^\circ}$$

$$m \angle 7 + m \angle 5 = \underline{180^\circ}$$

These are all examples of supplementary angles, which means:
2 angles whose measures have a sum of 180°

8. What do you notice about

- m \angle 1 and m \angle 4? same
- m \angle 2 and m \angle 3? same
- m \angle 5 and m \angle 8? same
- m \angle 6 and m \angle 7? same

These are all examples of vertical angles, which means:
A pair of opposite congruent angles formed by intersecting lines.

9. What do you notice about

- m \angle 1 and m \angle 5? 110°
- m \angle 2 and m \angle 6? 70°
- m \angle 3 and m \angle 7? 110°
- m \angle 4 and m \angle 8? 70°

These are all examples of corresponding angles, which means:
Angles formed by a transversal cutting two or more lines that are in the same relative position.

10. What do you notice about

- m \angle 1 and m \angle 8? both 110°
- m \angle 2 and m \angle 7? both 70°

These are all examples of alternate exterior angles, which means:
A pair of angles on the outer sides of two lines cut by a transversal that are on opposite sides of the transversal.

11. What do you notice about

- m \angle 3 and m \angle 6? both 70°
- m \angle 4 and m \angle 5? both 110°

These are all examples of alternate interior angles, which means:
A pair of angles on the inner sides of two lines cut by a transversal that are on opposite sides of the transversal.