

BE - Geometry I

Wednesday 10-12-11

Through points $(3, 6)$, $(9, -4)$

- ① Find the equation of the line in Slope-Intercept form
 - ② Find the equation of the perpendicular to the line in #① through $(-1, 4)$.
 - ③ Graph both lines in ① and ②
-

Homework Review Pg. 188-189 #3-10

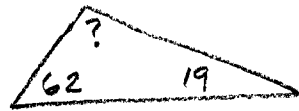
③



$$\text{Missing } \angle \Rightarrow 180 - (85 + 52)$$

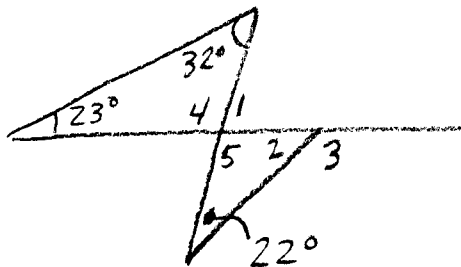
$$180 - 137 = \boxed{43^\circ}$$

④



$$\text{Missing } \angle \Rightarrow 180 - (62 + 19)$$

$$180 - 81 = \boxed{99^\circ}$$



⑤ $m\angle 1 = ?$ $m\angle 4 = 180 - (23 + 32) = 180 - 55 = 125^\circ$

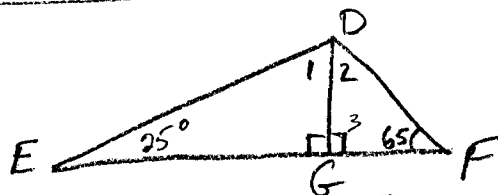
$$\therefore m\angle 1 = 180 - 125 = \boxed{55^\circ = m\angle 1}$$

⑥ $m\angle 2 = ?$ $m\angle 5 = 180 - 55 = 125^\circ$

$$\therefore m\angle 2 = 180 - (125 + 22) = 180 - 147 = \boxed{33^\circ}$$

$m\angle 2$

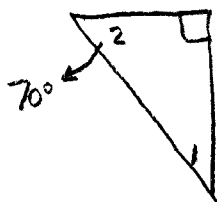
⑦ $m\angle 3 = ?$ $m\angle 3 = 180 - 33 = \boxed{147^\circ}$



⑧ $m\angle 1 = ?$ $90 - 25 = \boxed{65^\circ}$

⑨ $m\angle 2 = ?$ $90 - 65 = \boxed{25^\circ}$

⑩



$$m\angle 1 = 90 - 70 = \boxed{20^\circ}$$

Ch. 4-1 Classifying Triangles

Vocabulary (Pg. 178)

ACUTE ANGLE $\Rightarrow$ less than 90°

obtuse angle $\Rightarrow$ greater than 90°

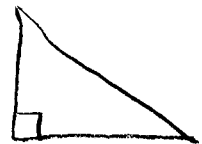
Right angle $\Rightarrow$ EQUAL 90°



ACUTE $\triangle$
ALL $\angle$ s ACUTE



OBTUSE $\triangle$
ONE $\angle$ OBTUSE



Right $\triangle$
ONE $\angle = 90^\circ$

Exercise: using a protractor to
measure angles.

(Pg. 30)

Exercise - Need protractor $\rightarrow$ see next pg.
(Pg 184) scissors
 paper

Homework: Pg 189 # 11-27 ODD

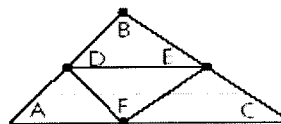
Angles of Triangles

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There are special relationships among the angles of a triangle.

Activity 1 Find the relationship among the measures of the interior angles of a triangle.

- Step 1** Draw an obtuse triangle and cut it out. Label the vertices A , B , and C .
- Step 2** Find the midpoint of $\overline{AB}$ by matching A to B . Label this point D .
- Step 3** Find the midpoint of $\overline{BC}$ by matching B to C . Label this point E .
- Step 4** Draw $\overline{DE}$.
- Step 5** Fold $\triangle ABC$ along $\overline{DE}$. Label the point where B touches $\overline{AC}$ as F .
- Step 6** Draw $\overline{DF}$ and $\overline{FE}$. Measure each angle.



Analyze the Model

Describe the relationship between each pair.

- $\angle A$ and $\angle DFA$
- $\angle B$ and $\angle DFE$
- $\angle C$ and $\angle EFC$
- What is the sum of the measures of $\angle DFA$, $\angle DFE$, and $\angle EFC$?
- What is the sum of the measures of $\angle A$, $\angle B$, and $\angle C$?
- Make a conjecture** about the sum of the measures of the angles of any triangle.

In the figure at the right, $\angle 4$ is called an *exterior angle* of the triangle. $\angle 1$ and $\angle 2$ are the *remote interior angles* of $\angle 4$.

