

Lesson 2.05 – “On Your Own” Worksheet

Name: Key

6.) Use the figure at right. Find the measures of $\angle BDA$, $\angle ADQ$, and $\angle CDQ$ for the following conditions.

a.) If $m\angle BDC = 62^\circ$, then:

$$m\angle BDA = \underline{118^\circ}$$

$$m\angle ADQ = \underline{62^\circ}$$

$$m\angle CDQ = \underline{118^\circ}$$

b.) If $m\angle BDC = 72^\circ$, then:

$$m\angle BDA = \underline{108^\circ}$$

$$m\angle ADQ = \underline{72^\circ}$$

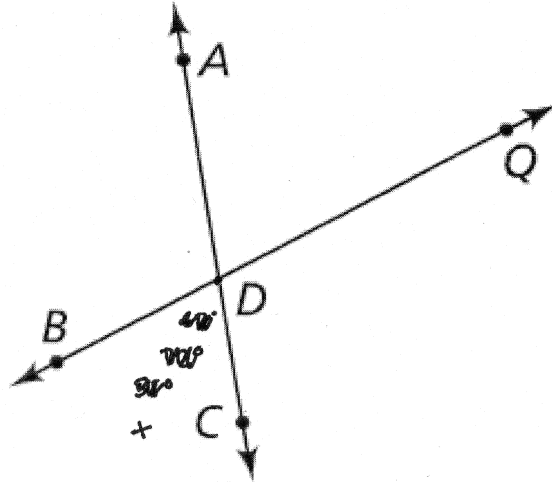
$$m\angle CDQ = \underline{108^\circ}$$

c.) If $m\angle BDC = 55^\circ$, then:

$$m\angle BDA = \underline{125^\circ}$$

$$m\angle ADQ = \underline{55^\circ}$$

$$m\angle CDQ = \underline{125^\circ}$$



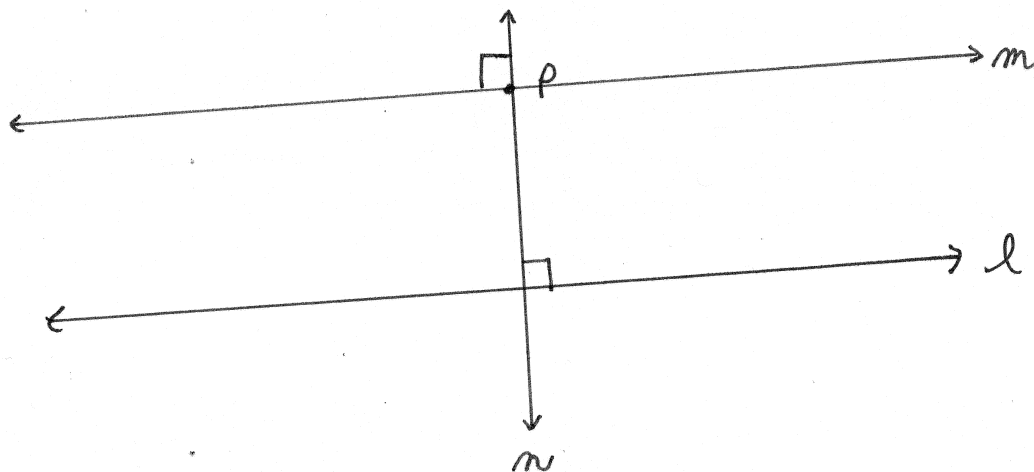
d.) If $m\angle BDC = x^\circ$, then:

$$m\angle BDA = \underline{180^\circ - x}$$

$$m\angle ADQ = \underline{x^\circ}$$

$$m\angle CDQ = \underline{180^\circ - x}$$

Use a straight edge to draw line l . Draw a point P not on line l .



7.) How many lines could you draw that are parallel to line l that pass through point P ? Explain how you know.

There is only one line that passes through point P and is parallel to line l . Any other line that passes through point P would intersect line l .

8.) How many lines could you draw that are perpendicular to line l that pass through point P ? Explain how you know.

There is only one line that passes through point P that is perpendicular to line l . All other lines passing through point P would not be perpendicular to line l .

9a.) Use your straightedge to draw a line through point P that is perpendicular to line l . Label the new line as line n .

9b.) Use your straightedge to draw a line through point P that is perpendicular to line n . Label the new line as line m .

9c.) Where will line l and line m intersect? Explain your answer.

Lines m and l will never intersect. They are parallel. Because they are both \perp to the same line, they must be parallel.