

4.1

Name (print first and last) \_\_\_\_\_ Per \_\_\_\_\_ Date: 11/12 due 11/13

4.1 Angles: Adjacent Angles around a point and linear pairs

Geometry Regents 2013-2014 Ms. Lomac

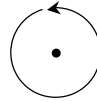
SLO: I can solve problems involving angles around a point, linear pairs, and vertical angles.

(1)  Construct  $180^\circ$  rotation of point Q around point C.

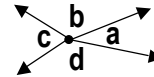


(2)  What do we know about angles already?

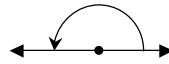
(a) The number of degrees around a point is \_\_\_\_\_.



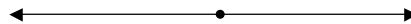
(b) If four angles with measures  $a, b, c,$  and  $d$  are **adjacent angles** around a point, then the sum of the angles  $(a + b + c + d)$  is \_\_\_\_\_.



(c) The number of degrees in a **straight angle** is \_\_\_\_\_.

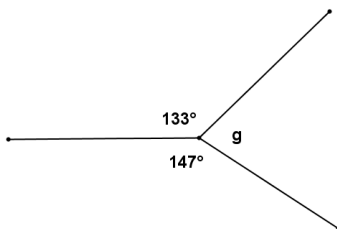


(d) If a straight angle is formed by two **adjacent angles**, the angles are called a **linear pair**. Add a ray to the diagram below to form a linear pair. The sum of the two angles is \_\_\_\_\_. When the sum of two angles is \_\_\_\_\_ the angles are **supplementary**.



(3)  Use what you have stated in problem number 2 to find the measure of each unknown angle. Write an equation and solve it.

(a) Determine the measure of angle  $g$ .



$m\angle g =$  \_\_\_\_\_ because \_\_\_\_\_

---

---

---

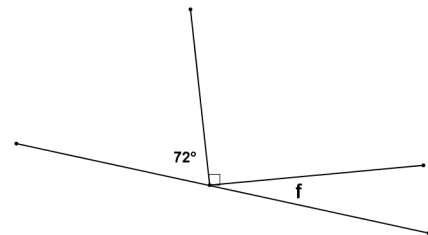
---

---

---

---

(b) Determine the measure of angle  $f$ .



$m\angle f =$  \_\_\_\_\_ because \_\_\_\_\_

---

---

---

---

---

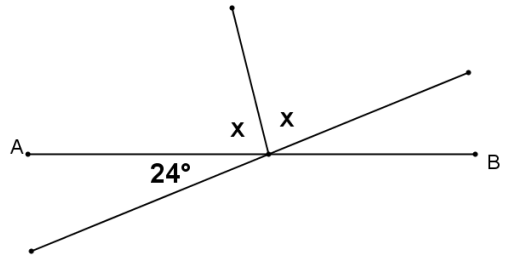
---

---



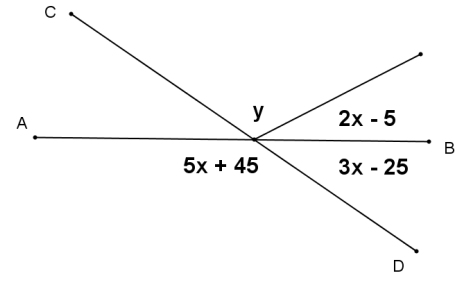
4.1

(c)



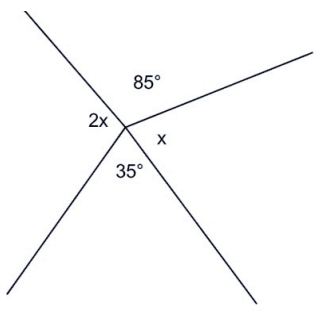
$x = \underline{\hspace{2cm}}$  because ...

(d)



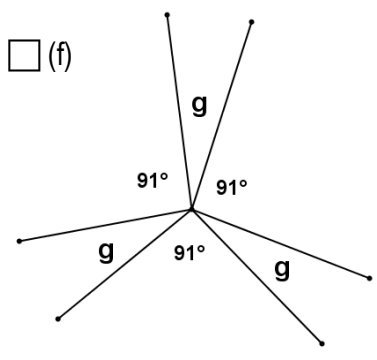
$x = \underline{\hspace{2cm}}$  because ...       $y = \underline{\hspace{2cm}}$  because ...

(e)



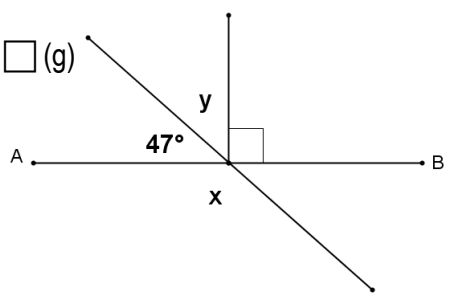
$x = \underline{\hspace{2cm}}$  because ...

(f)



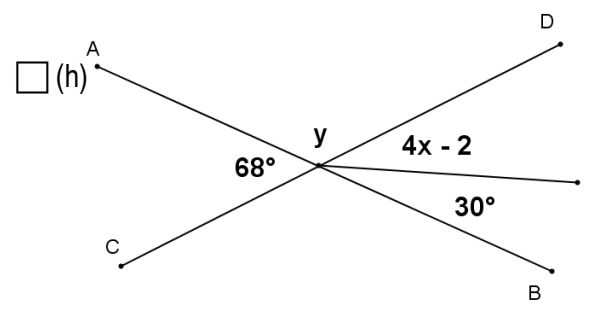
$g = \underline{\hspace{2cm}}$  because ...

(g)



$x = \underline{\hspace{2cm}}$  because ...       $y = \underline{\hspace{2cm}}$  because ...

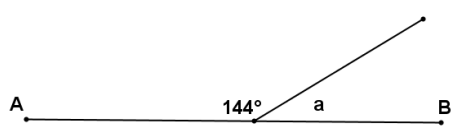
(h)



$x = \underline{\hspace{2cm}}$  because ...       $y = \underline{\hspace{2cm}}$  because ...

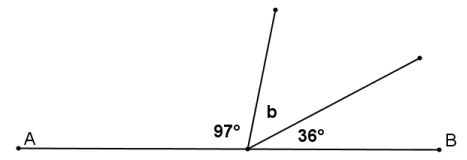
4.1

(i)



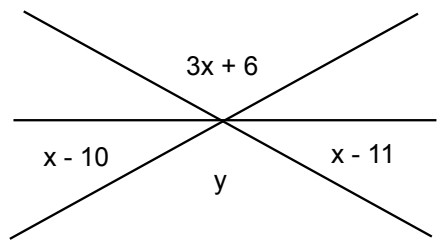
$a = \underline{\hspace{2cm}}$  because ...

(j)



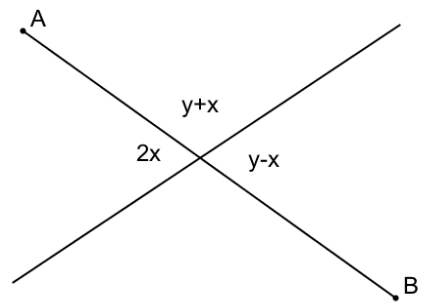
$b = \underline{\hspace{2cm}}$  because ...

(k)



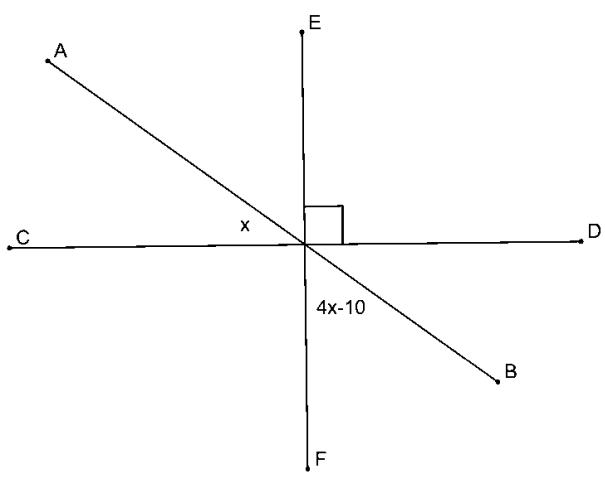
$x = \underline{\hspace{2cm}}$  because ...       $y = \underline{\hspace{2cm}}$  because ...

(l)



$x = \underline{\hspace{2cm}}$  because ...       $y = \underline{\hspace{2cm}}$  because ...

(m)



$x = \underline{\hspace{2cm}}$  because ...