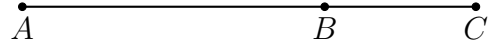


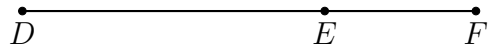
Name:

## 2.6 PreTest: Angle measures

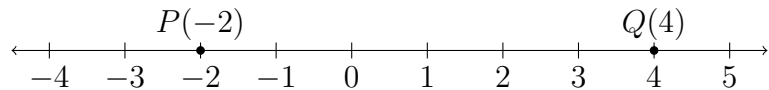
1. Given  $\overline{ABC}$ ,  $AB = 84$ , and  $AC = 116$ . Find  $BC$ .



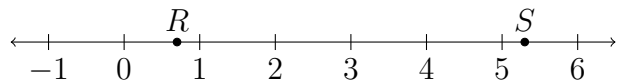
2. Given  $\overline{DEF}$ ,  $DE = 7\frac{1}{3}$ , and  $EF = 3\frac{1}{6}$ . Find  $DF$ .



3. Find the distance between  $P$  and  $Q$ .



4. Find  $RS$ , given  $R = 0.7$  and  $S = 5.3$ .

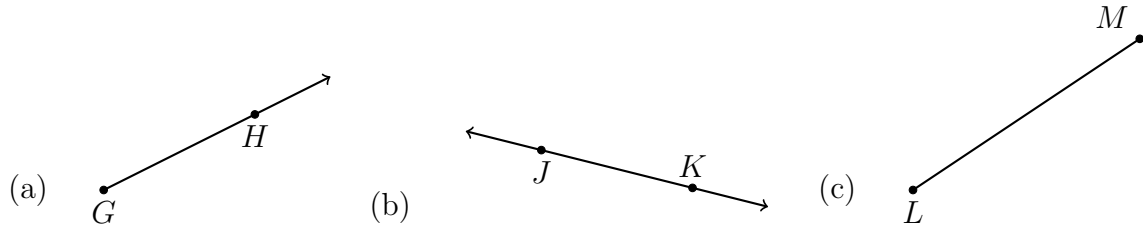


5. Draw the ray  $\overrightarrow{WV}$  with a straight edge (or ruler). Measure  $VW$  in centimeters.

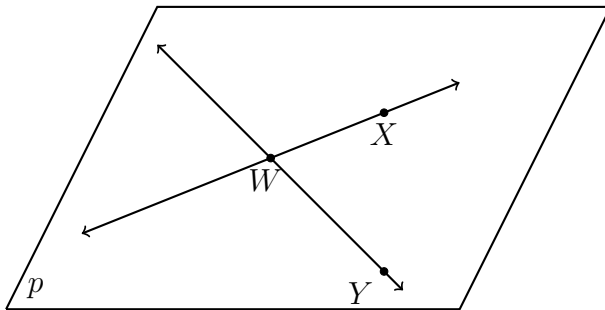
$\dot{V}$

$\dot{W}$

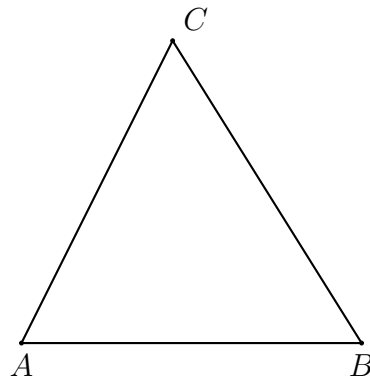
6. A flat surface is a(n) \_\_\_\_\_.
7. Two line segments or angles of equal measure are \_\_\_\_\_.
8. Use conventional notation to write the names of the ray, line, and segment shown.



9. Points that are all located on the same plane are \_\_\_\_\_.
10. Identify three points in the given plane.



11. Given isosceles  $\triangle ABC$  with  $\overline{AB} \cong \overline{AC}$ . On the diagram mark the congruent line segments with tick marks.



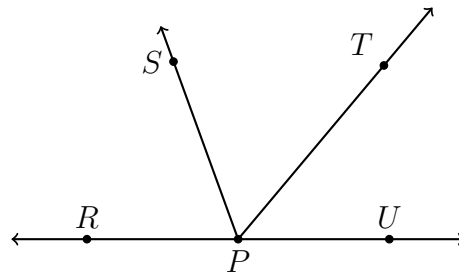
Name: \_\_\_\_\_

12. Given the situation in the diagram, answer each question. Circle True or False.

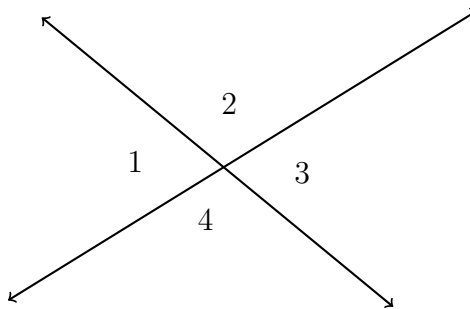
(a) T or F:  $\overrightarrow{PR}$  and  $\overrightarrow{PU}$  are opposite rays.

(b) T or F:  $\angle TPR$  is an obtuse angle.

(c) T or F:  $\angle RPS$  and  $\angle TPU$  are adjacent angles.



13. As shown below, two lines intersect making four angles:  $\angle 1$ ,  $\angle 2$ ,  $\angle 3$ , and  $\angle 4$ .



(a) Given that  $m\angle 1 = 75^\circ$ , find  $m\angle 2 =$  \_\_\_\_\_

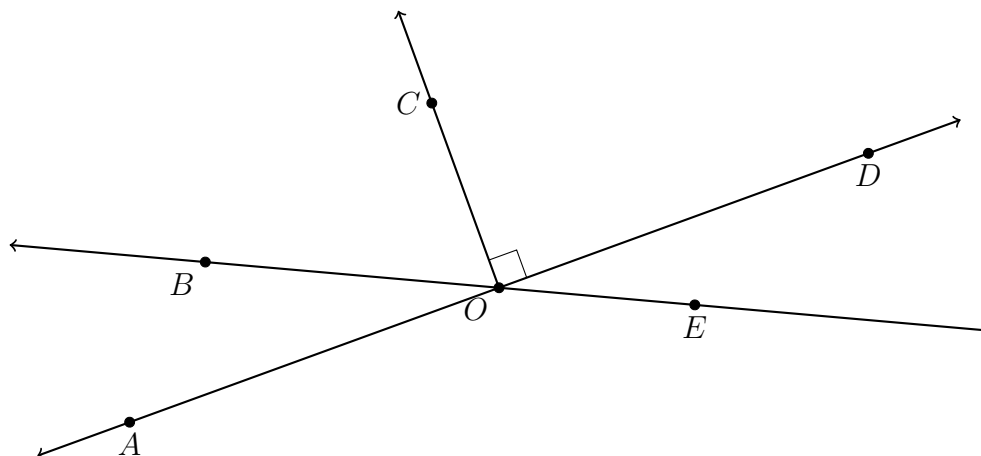
(b) Find  $m\angle 3 =$  \_\_\_\_\_

(c) True or false,  $\angle 1$  and  $\angle 4$  are supplementary angles. \_\_\_\_\_

14. (a) Given, the diagram below. Name a right angle: \_\_\_\_\_

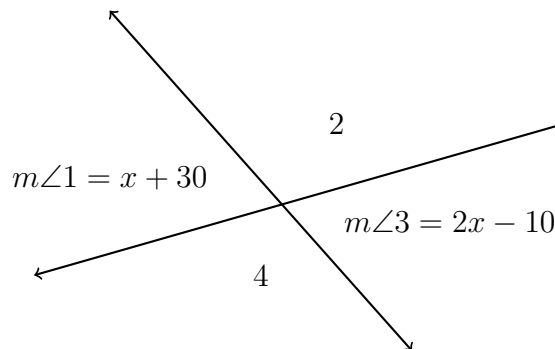
(b) Name the angle that is opposite to  $\angle AOB$ : \_\_\_\_\_

(c) Name an angle that is supplementary to  $\angle COB$ : \_\_\_\_\_

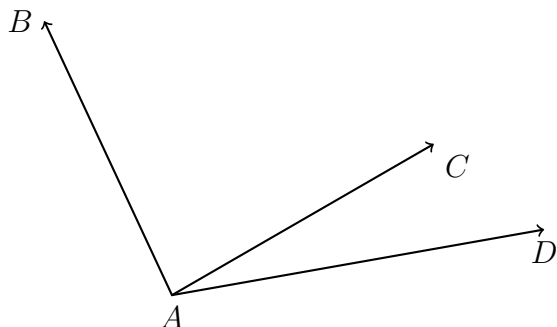


For full credit on these three problems, start with an equation and check your solution.

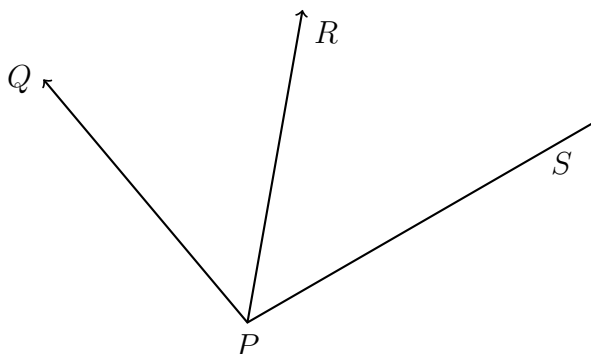
15. As shown below, two lines intersect making four angles:  $\angle 1$ ,  $\angle 2$ ,  $\angle 3$ , and  $\angle 4$ . Given that  $m\angle 1 = x + 30$  and  $m\angle 3 = 2x - 10$ , find  $m\angle 1$ .



16. Given  $m\angle BAC = 5x - 5$  and  $m\angle DAC = x$ ,  $m\angle BAD = 115^\circ$ . Find  $m\angle BAC$ .



17. An angle bisector is shown below, with  $\overrightarrow{PR}$  bisecting  $\angle QPS$ . Given  $m\angle QPR = 4x + 2$  and  $m\angle QPS = 10x - 20$ , find  $m\angle QPS$ .



Name:

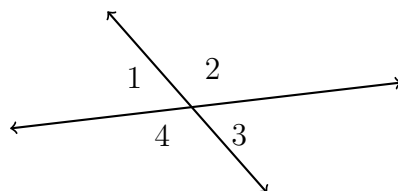
**Do Not Solve! Make a drawing on the right, an equation to the left, and circle where it states what to find.**

18. The point  $Q$  is the midpoint of  $\overline{PR}$ ,  $PQ = 11$ , and  $QR = 2x + 1$ . Find  $x$ .
19. Given  $\overline{PQR}$ , with  $PQ = 3x - 7$ ,  $QR = x + 3$ , and  $PR = 12$ . Find  $x$ .
20. Given that  $Q$  bisects  $\overline{PR}$ .  $PQ = 2x - 5$ ,  $PR = 42$ . Find  $x$ .
21. The points  $P$ ,  $Q$ , and  $R$  are collinear, with  $PQ = x + 4$  and  $PR = 27$ .  $\overline{QR}$  is twice the length of  $\overline{PQ}$ . Find  $x$ .

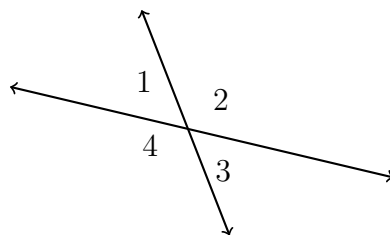
**Do Not Solve!**

**Model the situation with an equation. Circle where it states what to find.**

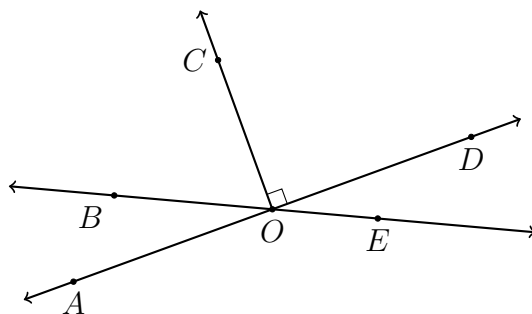
22. Two lines intersect making four angles:  $\angle 1$ ,  $\angle 2$ ,  $\angle 3$ , and  $\angle 4$ . Given that  $m\angle 1 = 4x + 30$  and  $m\angle 2 = 8x - 10$ , find  $x$ .



23. Given that  $m\angle 2 = 5x + 30$  and  $m\angle 4 = 7x - 10$  as shown in the diagram, find  $m\angle 2$ .



24. In the diagram below  $\angle AOB = 30^\circ$  and  $\angle COB = 5x + 10$ . Find  $x$ .



25. In the diagram below  $\angle DOE = 60^\circ$  and  $\angle DOB = 13x - 10$ . Find  $x$ .

