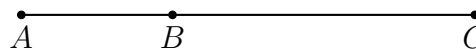


Name:

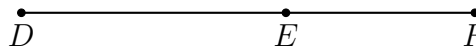
2.7 Test: Angle measures

Diagrams are not necessarily drawn to scale unless otherwise stated.

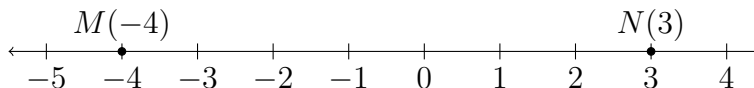
1. I have my own calculator with me today. (circle one). Yes No
2. I have a notebook, ruler, and protractor (circle one). Yes No
3. Given \overline{ABC} , $AB = 29$, and $BC = 63$. Find AC .



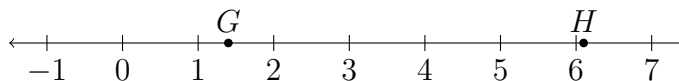
4. Given \overline{DEF} , $DE = 5\frac{1}{14}$, and $DF = 9\frac{4}{7}$. Find EF . State as a fraction.



5. Find the distance between M and N .



6. Find GH , given $G = 1.4$ and $H = 6.1$.

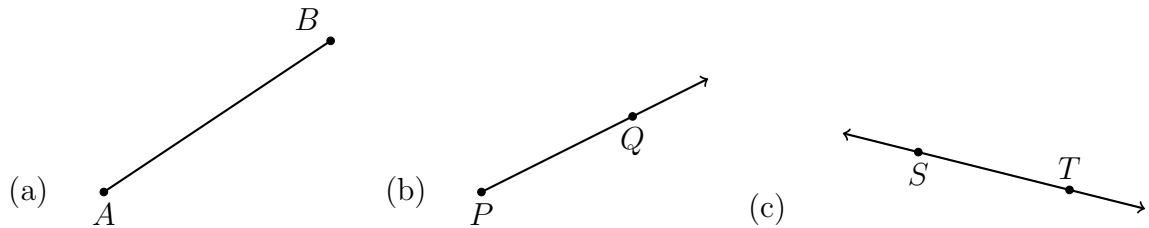


7. Draw the ray \overrightarrow{ST} with a straight edge (or ruler). Measure ST in centimeters.

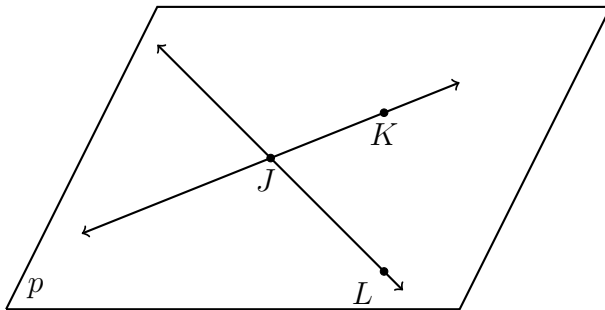
\dot{S}

\dot{T}

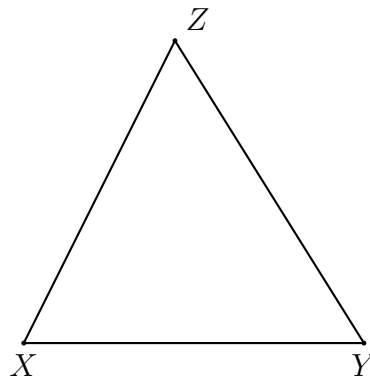
8. Two rays with a common vertex compose a(n) _____.
9. Points that are all located on the same line are _____.
10. Use conventional notation to write the names of the ray, line, and segment shown.



11. Two line segments or angles of equal measure are _____.
12. Identify two line segments in the given plane.



13. Given isosceles $\triangle XYZ$ with $\overline{XY} \cong \overline{XZ}$. On the diagram mark the congruent line segments with tick marks.



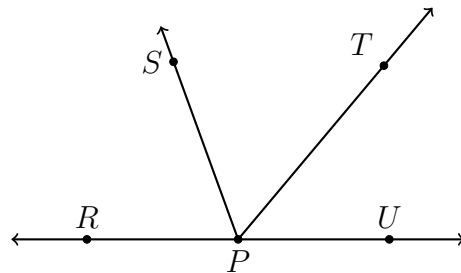
Name: _____

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

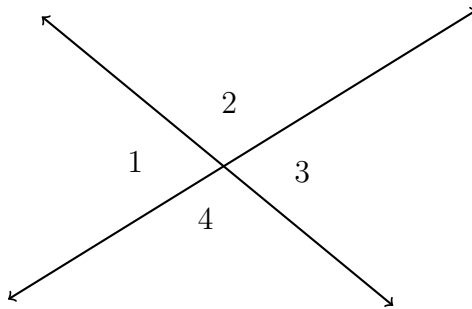
(a) T or F: $\angle RPT$ and $\angle SPU$ are adjacent angles.

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

(c) T or F: \overrightarrow{PS} and \overrightarrow{PT} are opposite rays.



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



(a) Given that $m\angle 1 = 65^\circ$, find $m\angle 3 =$ _____

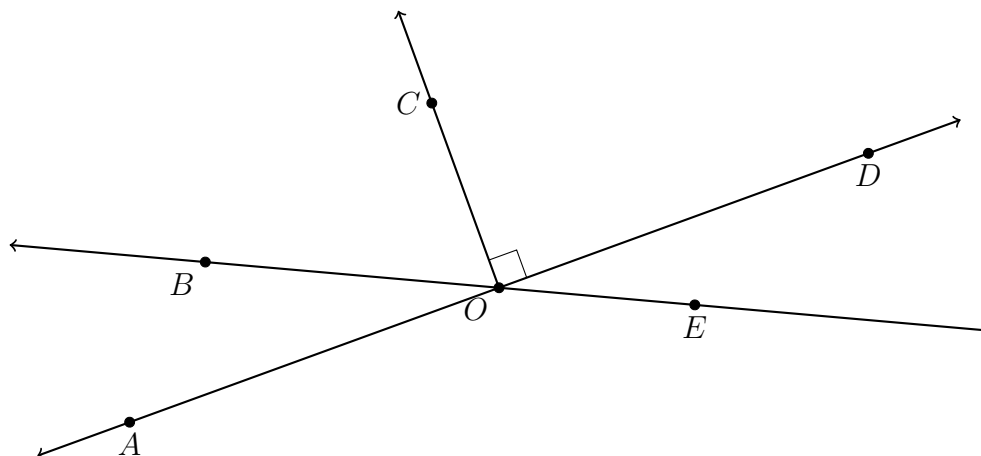
(b) Find $m\angle 2 =$ _____

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

16. (a) Given, the diagram below. Name a right angle: _____

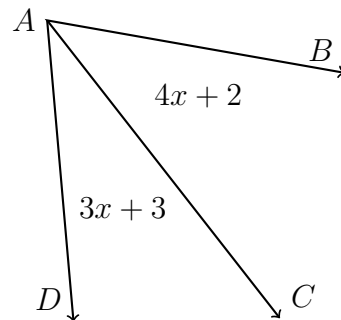
(b) Name an angle that is complementary to $\angle AOB$: _____

(c) Name the angle that is opposite to $\angle DOE$: _____

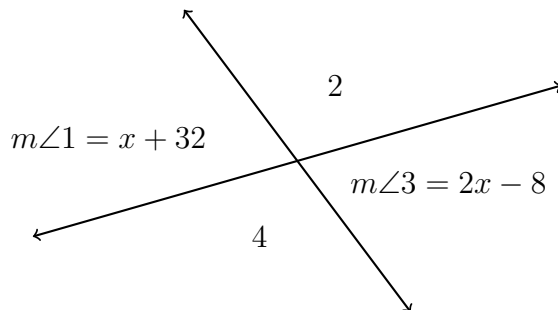


For full credit on these three problems, start with an equation and check your solution.

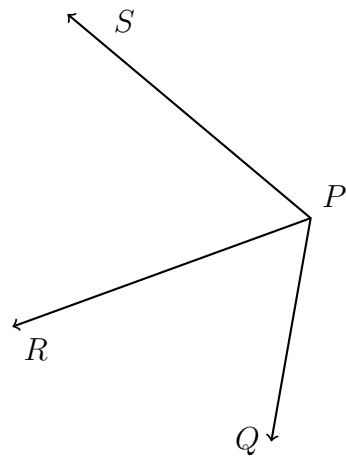
17. Given $m\angle BAC = 4x + 2$ and $m\angle CAD = 3x + 3$, $m\angle BAD = 75^\circ$. Find $m\angle BAC$.



18. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = x + 32$ and $m\angle 3 = 2x - 8$, find $m\angle 1$.



19. An angle bisector is shown below, with \overrightarrow{PR} bisecting $\angle QPS$. Given $m\angle QPR = 5x - 8$ and $m\angle RPS = 3x + 20$, find $m\angle QPS$.



Name:

Do Not Solve! Draw and label the situation on the right, model with an equation to the left, and circle where it states what to find.

20. Given \overline{ABC} , with $AB = 2x - 7$, $BC = 3x - 3$, and $AC = 15$. Find AB .

21. Given that K bisects \overline{JL} . $JK = 3x + 8$, $KL = 17$. Find x .

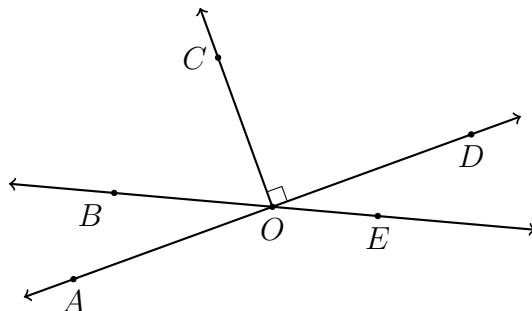
22. The point M is the midpoint of \overline{UV} , $UM = x + 7$, and $MV = 2x + 1$. Find UV .

23. The points P , Q , and R are collinear, with $PQ = 6x + 16$ and $PR = 42$. \overline{QR} is half the length of \overline{PQ} . Find x .

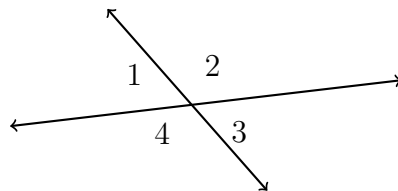
Do Not Solve!

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

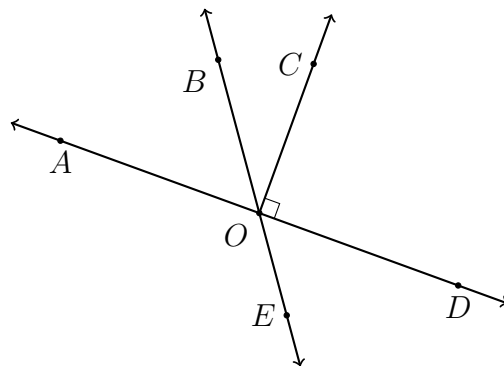
24. In the diagram below $\angle AOB = 2x$ and $\angle COB = 5x + 20$. Find $m\angle AOB$.



25. Two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = 6x + 28$ and $m\angle 3 = 8x + 12$. Find $m\angle 1$.



26. In the diagram below $\angle AOB = 10x + 3$ and $\angle DOE = 63^\circ$. Find x .



27. Given that $m\angle 2 = 10x - 20$ and $m\angle 3 = 3x + 5$ as shown in the diagram, find $m\angle 2$.

