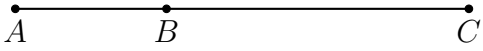
BECA / Dr. Huson / Geometry Name:
1-12 Test angles

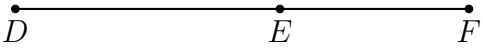
Test: I can solve for angle measures

Diagrams are not necessarily drawn to scale unless otherwise stated.

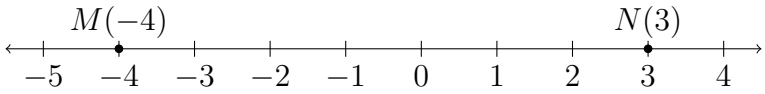
1. I have my own calculator with me today. (circle one). Yes No
2. I have a notebook, ruler, and protractor (circle one). Yes No
3. Given $\overline{ABC}$, $AB = 29$, and $BC = 63$. Find AC.



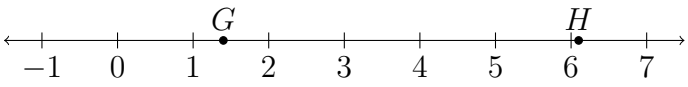
4. Given $\overline{DEF}$, $DE = 5\frac{1}{14}$, and $DF = 9\frac{4}{7}$. Find EF. State as a fraction.



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.

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.
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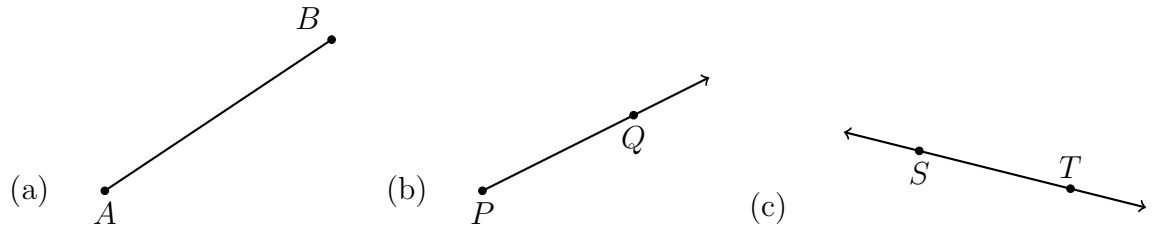
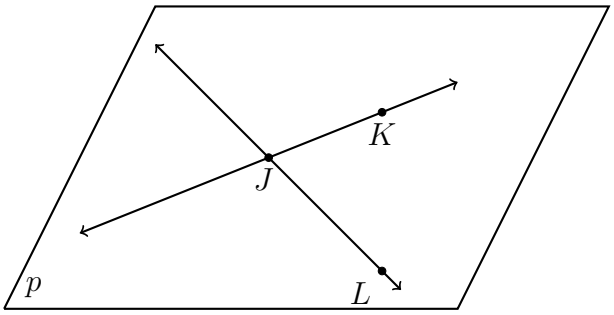
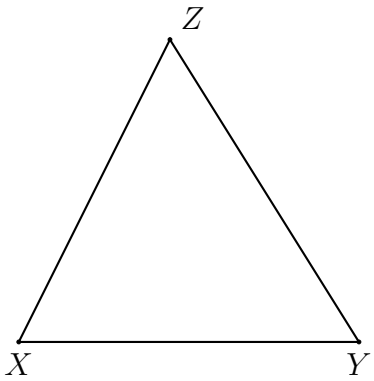


11. Two line segments or angles of equal measure are _____.

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.



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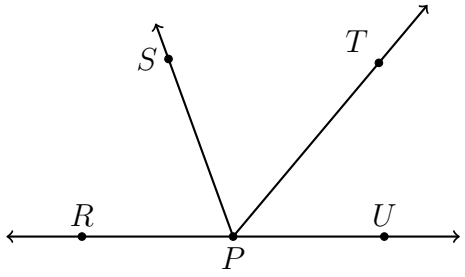
14. Given the situation in the diagram, answer each question. Circle True or False.

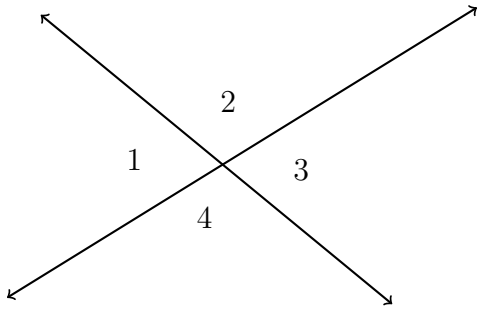


(a) T or F: $\overrightarrow{PR}$ and $\overrightarrow{PU}$ are opposite rays.

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

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

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



(a) Given that $m\angle 1 = 75°$, find $m\angle 2 =$ _____

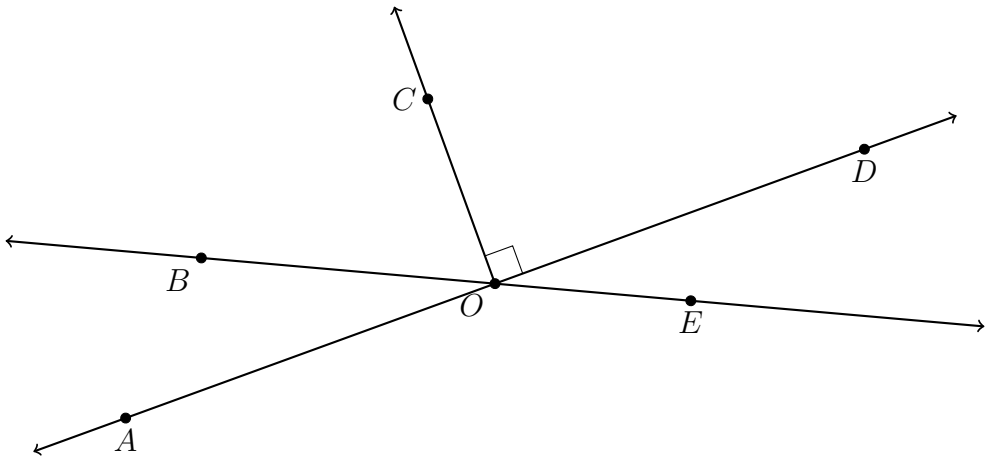
(b) Find $m\angle 3 =$ _____

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

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

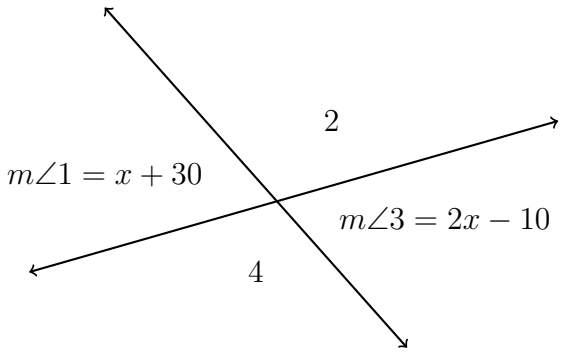
(b) Name the angle that is opposite to $\angle AOB$: _____

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

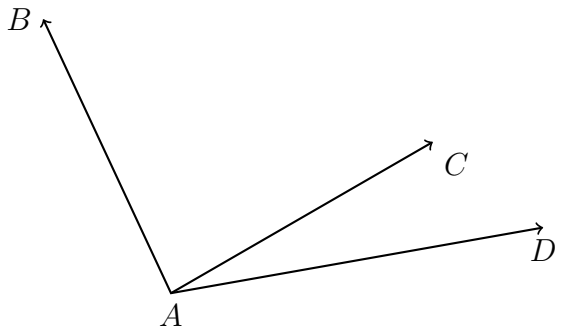


For full credit on these three problems, start with an equation and check your solution.

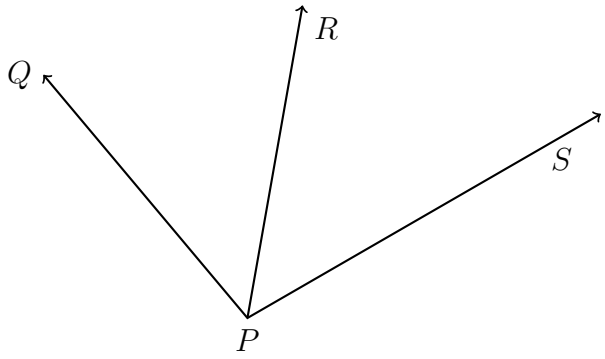
17. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = x + 30$ and $m\angle 3 = 2x - 10$, find $m\angle 1$.



18. Given $m\angle BAC = 5x - 5$ and $m\angle DAC = x$, $m\angle BAD = 115°$. Find $m\angle BAC$.



19. 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 $m\angle QPS$.



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

20. The point Q is the midpoint of $\overline{PR}$, $PQ = 11$, and $QR = 2x + 1$. Find x.

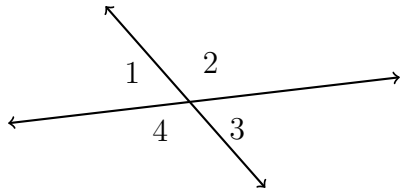
21. Given $\overline{PQR}$, with $PQ = 3x - 7$, $QR = x + 3$, and $PR = 12$. Find x.

22. Given that Q bisects $\overline{PR}$. $PQ = 2x - 5$, $PR = 42$. Find x.

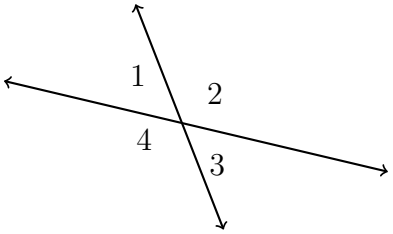
23. The points P, Q, and R are collinear, with $PQ = x + 4$ and $PR = 27$. $\overline{QR}$ is twice the length of $\overline{PQ}$. Find x.

Do Not Solve!
Model the situation with an equation. Circle where it states what to find.

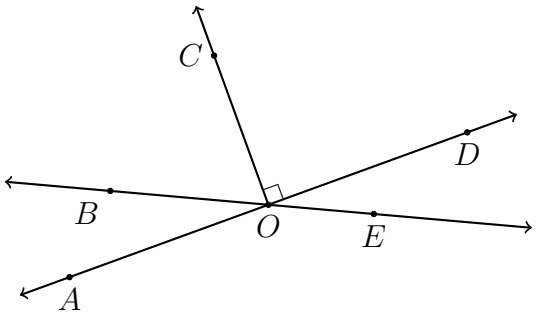
24. Two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = 4x+30$ and $m\angle 2 = 8x - 10$, find x.



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



26. In the diagram below $\angle AOB = 30°$ and $\angle COB = 5x + 10$. Find x.



27. In the diagram below $\angle DOE = 60°$ and $\angle DOB = 13x - 10$. Find x.