BECA / Dr. Huson / Geometry   Name:
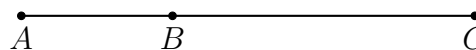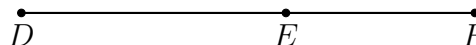
1-13 Test angles

Test: I can solve for angle measures

Diagrams are not necessarily drawn to scale unless otherwise stated.
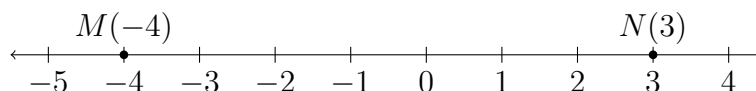
1. I have my own calculator with me today. (circle one). Yes   No

2. I have a notebook, ruler, and protractor (circle one). Yes   No

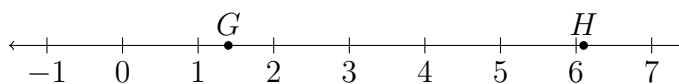3. Given $\overline{ABC}$, $AB = 29$, and $BC = 63$. Find AC.

A   B   C

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

D   E   F

5. Find the distance between M and N.

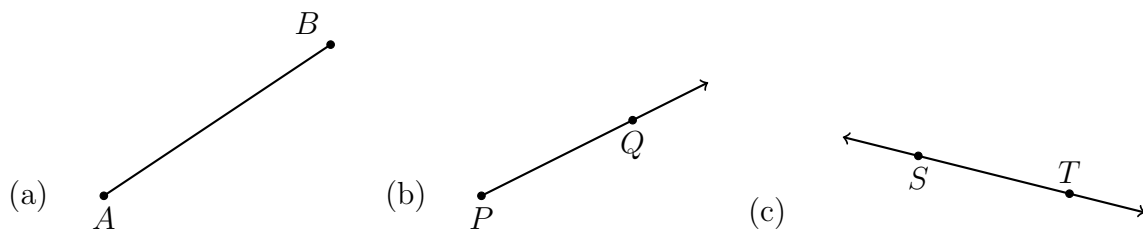$M(-4)$ $N(3)$

−5   −4   −3   −2   −1   0   1   2   3   4

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

G   H

−1   0   1   2   3   4   5   6   7

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

$\overset{\bullet}{S}$

$\overset{\bullet}{T}$
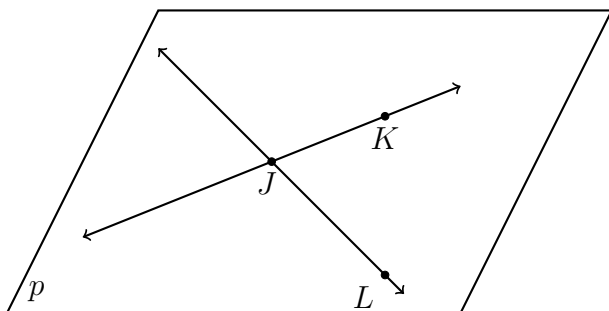
8. Two rays with a common vertex compose a(n) _____.

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.
.

(a) B, A

(b) Q, P

(c) S, T

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

12. Identify two line segments in the given plane.

K
J
p
L

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

Z

X Y

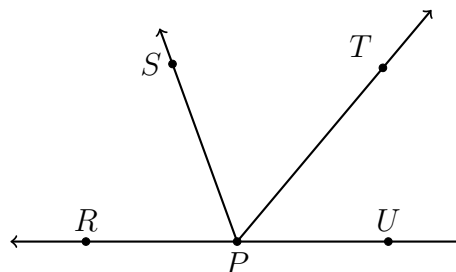BECA / Dr. Huson / Geometry   Name:

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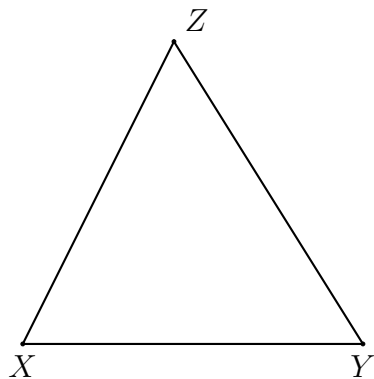
14. Given the situation in the diagram, answer each question. Circle True or False.
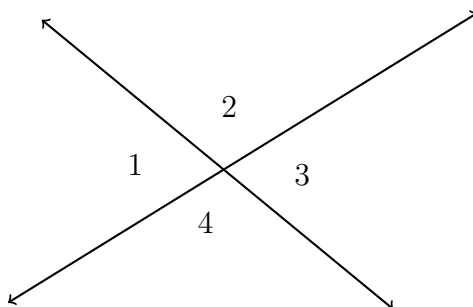
   (a) T or F: $\angle RPT$ and $\angle SPU$ are adjacent angles.

   (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 $m\angle 1 = 65°$, find $m\angle 3 =$ _____

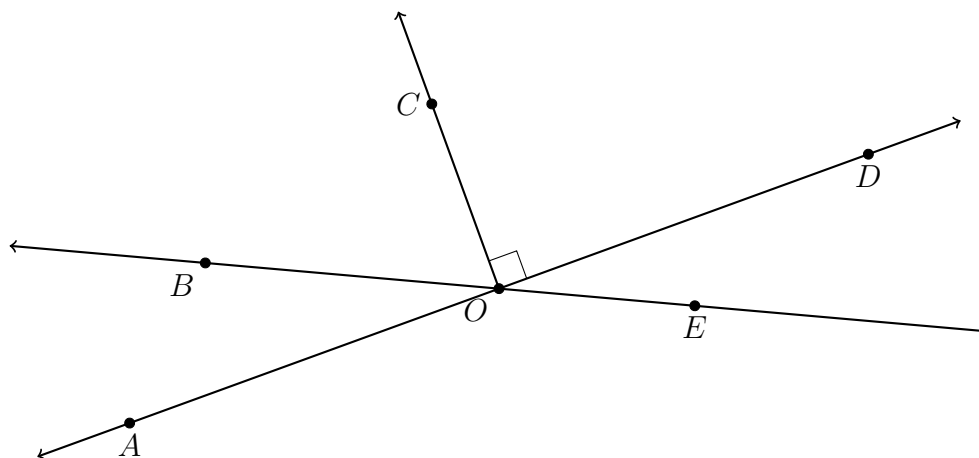   (b) Find $m\angle 2 =$ _____

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

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

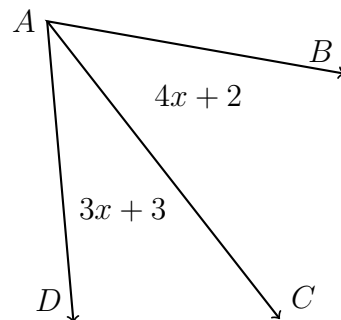   (b) Name an angle that is complementary to $\angle AOB$: _____

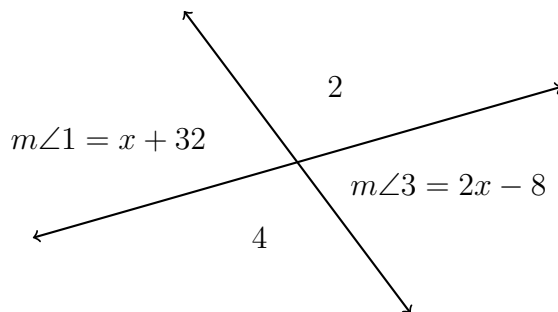   (c) Name the angle that is opposite to $\angle DOE$: _____

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

17. Given $m\angle BAC = 4x + 2$ and $m\angle CAD = 3x + 3$, $m\angle BAD = 75°$. 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 $m\angle QPS$.

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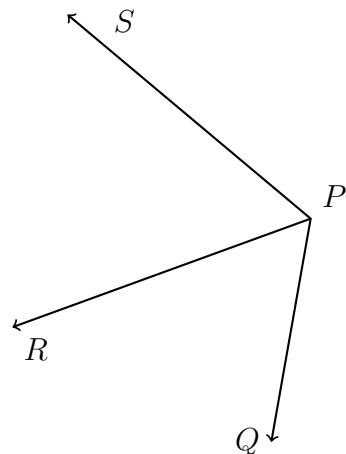
Do Not Solve! Draw and label the situation on the right, model with an equation to the left, and circle where it states what to find.

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

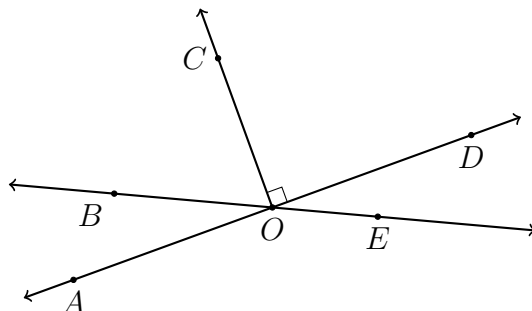21. Given that K bisects $\overline{JL}$. $JK = 3x + 8$, $KL = 17$. Find x.

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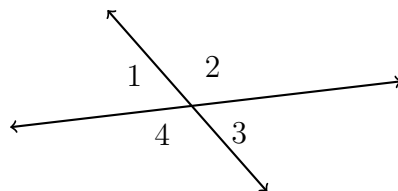
Do Not Solve!
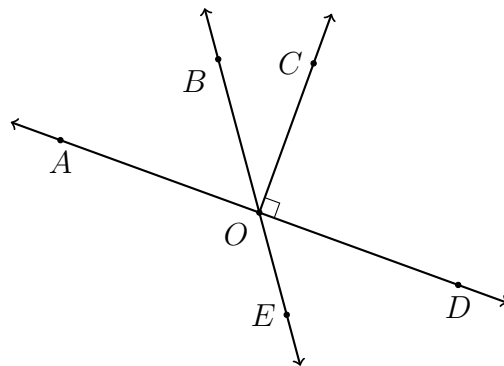**Model the situation with an equation. Circle where it states what to find.**

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 $\angle DOE = 63°$. Find x.

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