Chapter 1 Review
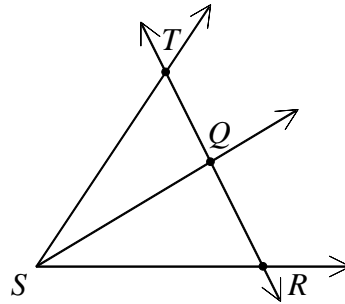
1. Name three points that are collinear.

[A] points T, Q, and R

[B] points T, Q, and S

[C] points S, Q, and R

[D] points T, S, and R

2. Write the correct notation for a ray from Q through P.

3. Describe what $\overrightarrow{RS}$ stands for. **Illustrate with a sketch**.

4. Draw four points (A, B, C, and D) on a line so that $\overrightarrow{AC}$ and $\overrightarrow{AB}$ are opposite rays and $\overrightarrow{AC}$ and $\overrightarrow{AD}$ are the same ray.
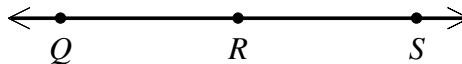
5. If $RS = 34.1$ and $QS = 68$, find QR.

[A] 33.9

[B] 23.9

[C] 102.1

[D] 34.1

6. Let E be between F and G. $FE = 6r - 20$ $EG = 5r - 24$ $FG = 55$

[A] $r = 14$

[B] $r = 5$

[C] $r = -4$

[D] $r = 9$

7. *R*, *S*, and *T* are collinear. *S* is between *R* and *T*. $RS = 2w + 1$ $ST = w - 1$ $RT = 18$.
Determine the length of $\overline{RS}$.

[A] 13

[B] 16

[C] 6

[D] 5

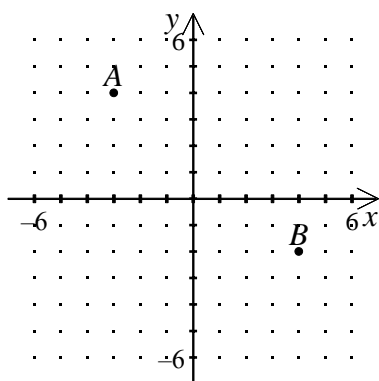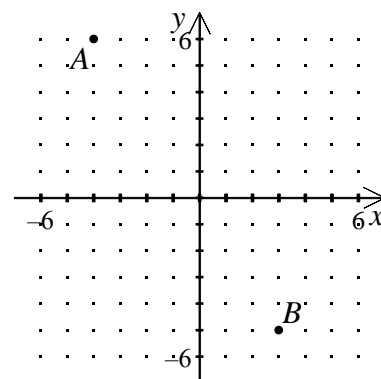8. Find the distance between the points (4, 3) and (2, –2).

[A] 29

[B] 37

[C] $\sqrt{29}$

[D] $\sqrt{37}$

9. Find the midpoint between the points (5, 5) and (9, 2).

10. Find the length of $\overline{AB}$.

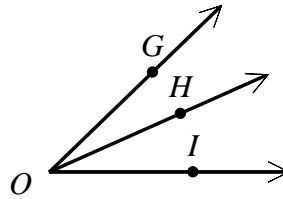11. The distance between points *A* and *B* is _____.

[A] $\sqrt{85}$

[B] $\sqrt{13}$

[C] 85

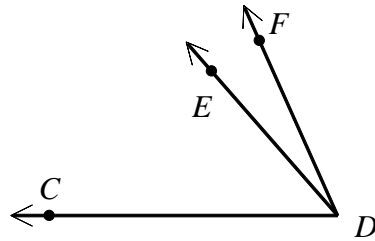[D] $\sqrt{11}$

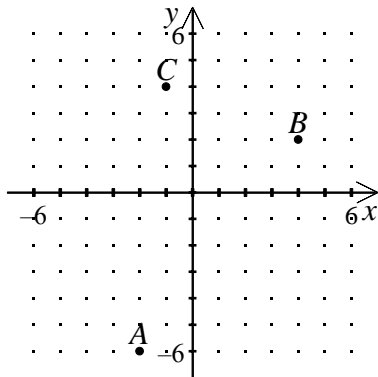12. If $m\angle GOI = 44°$ and $m\angle HOI = 24°$,
then what is the measure of $\angle GOH$?

13. $m\angle FDE = (2x + 7)°, m\angle CDE = (10x - 1)°, m\angle FDC = 66°$
Find $m\angle FDE$ and $m\angle CDE$.

14. The measurement of angle D is $31°$. Classify angle D as an acute, right, or obtuse angle.

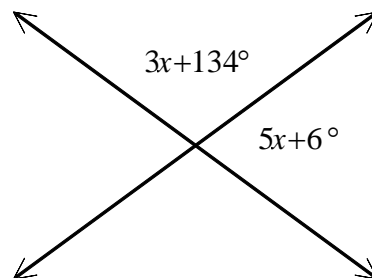15. Find the length of the segment from point C to the midpoint of $\overline{AB}$.

16. Find the $m\angle PMN$ and $m\angle NMR$ if $\overline{MN}$ bisects $\angle PMR$. The $m\angle PMR$ is $94°$.
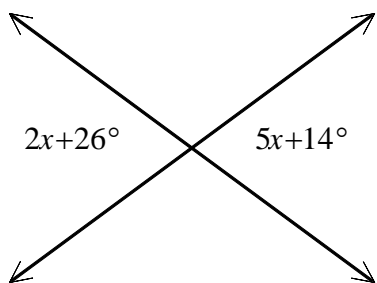Draw a sketch that shows the given information.

17. $\overrightarrow{AB}$ bisects $\measuredangle LAX$ and $\measuredangle LAX$ measures 72°. Find the measure of $\measuredangle XAB$.

18. Solve for x:

$3x+134°$

$5x+6°$

19. Solve for x:

$2x+26°$ $5x+14°$

20. Solve for x:

$4x+19°$ $5x+16°$

B

C

A D
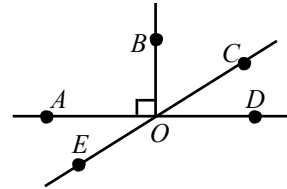
O

E
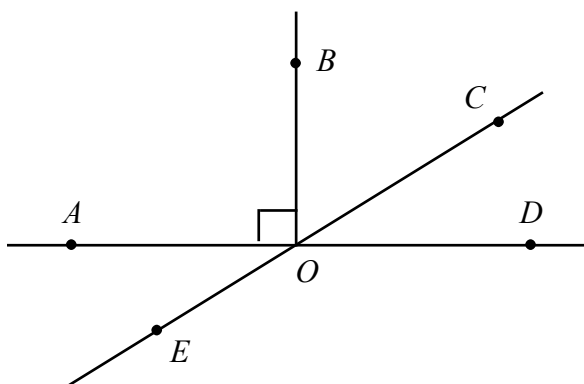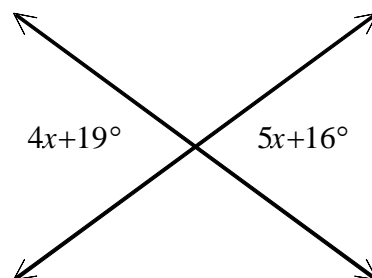
21. Name an angle complementary to $\measuredangle COD$.

21a. Name an angle supplementary to $\measuredangle AOC$.

23. Define complementary angles.

24. $\angle 1$ and $\angle 2$ are supplementary angles. $\angle 1$ and $\angle 3$ are vertical angles.
    If the $m\angle 2 = 23°$, find $m\angle 3$.

25. Name an angle supplementary to $\angle EOB$.
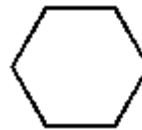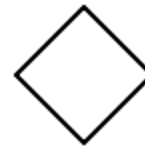
26. Which figure below is *not* a polygon?
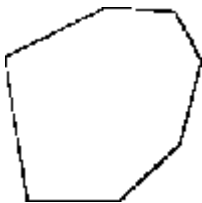
a.   b.   c.   d.
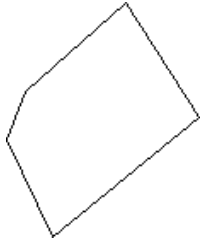
27. The figure below is an example of a(n) _____.

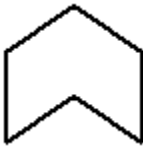a. nonagon   b. octagon   c. hexagon   d. heptagon

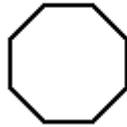28. The figure shown below _____.

a. is a pentagon
b. is a hexagon

c. is a heptagon
d. is a quadrilateral

29. Which figure below is *not* a convex polygon?

a.   b.   c.   d.
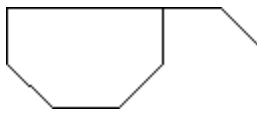

30. Which one of the statements below is *false*?
a. A circle is NOT a polygon.
b. An octagon has 8 angles.

c. A decagon has 10 sides.
d. A pentagon has 9 angles.

31. Name a polygon with 6 sides.
a. pentagon   b. octagon   c. quadrilateral   d. hexagon

32. Explain why the figure shown does not satisfy the definition of a polygon.

33. What properties of a polygon make it regular? Sketch an example.

34. The expressions $5x - 4$ and $3x$ represent two side lengths (in meters) of a regular octagon. Find the length of a side of the octagon.

35. The expressions $(3x + 8)°$ and $(5x - 42)°$ represent two angle measures of a regular pentagon. Find the measure of an angle of the pentagon.
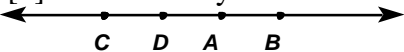
Geometry Chapter 1 Review

Name: _____

Period: _____

[1] [A]

[2] $\overrightarrow{QP}$

[3] A ray from *R* through *S*
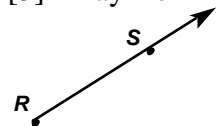
[4] Sketches vary.

[5] [A]
[6] [D]
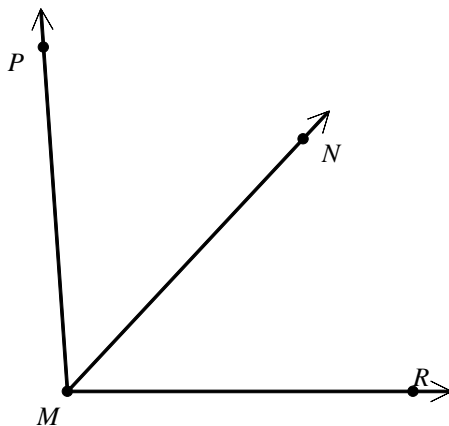[7] [A]
[8] [C]
[9] (7, 3.5)
[10] $\sqrt{170}$
[11] [A]
[12] 20
[13] $m \angle FDE = 17°$ and $m \angle CDE = 49°$
[14] acute
[15] $2\sqrt{10}$

[16] $m\angle PMN = 47°$, $m\angle NMR = 47°$

[17] $m\angle XAB = 36°$
[18] 5
[19] 4
[20] 3
[21] $\angle BOC$
[21a] $\angle AOE$ or $\angle COD$
[22] [A]

[23] Two angles are complementary if the sum of their measures is 90°.
[24] 157°
[25] $\angle BOC$
[26] A
[27] D
[28] A
[29] A
[30] D
[31] D
[32] Answers vary; for example, not every side intersects exactly two other sides.
[33] The polygon is equiangular and equilateral. Drawings will vary; this example is a regular hexagon.

[34] 6 meters
[35] 83°