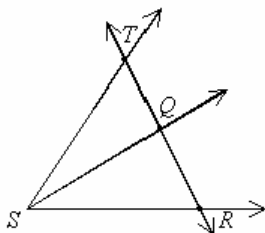


Geometry Mastery Test #1 Review

Short Answer

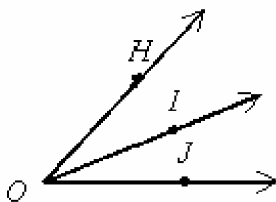
1. Name three points that are collinear.



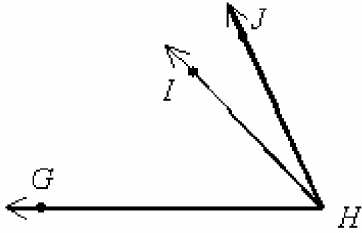
2. If $RS = 44$ and $QS = 68$, find QR .



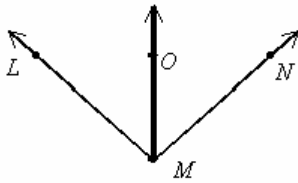
3. R , S , and T are collinear. S is between R and T . $RS = 2w + 1$, $ST = w - 1$, and $RT = 18$. Use the Segment Addition Postulate to solve for w . Then determine the length of \overline{RS} .
4. Find the distance between the points $(1, 4)$ and $(-2, -1)$.
5. Find the midpoint of the segment with endpoints $(9, 8)$ and $(3, 5)$.
6. If $m\angle IOJ = 22^\circ$ and $m\angle HOI = 25^\circ$, then what is the measure of $\angle HOJ$?



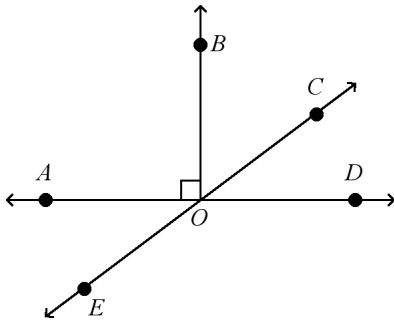
7. $m\angle JHI = (2x + 7)^\circ$ and $m\angle GHI = (8x - 2)^\circ$ and $m\angle JHG = 65^\circ$.
Find $m\angle JHI$ and $m\angle GHI$.



8. In the figure (not drawn to scale), \overrightarrow{MO} bisects $\angle LMN$, $m\angle LMO = (13x - 31)^\circ$, and $m\angle NMO = (x + 53)^\circ$.
Solve for x and find $m\angle LMN$.



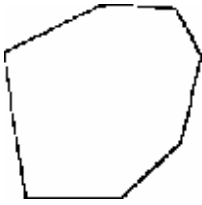
9. Name an angle adjacent to $\angle AOB$.



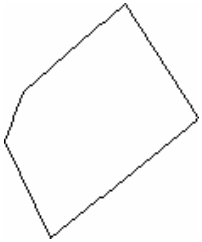
Complete the conditional statement to make a true statement.

10. If $\angle R$ and $\angle S$ are complementary and $m\angle R = 35^\circ$, then _____.
11. If $\angle G$ and $\angle H$ are supplementary and $m\angle H = 67^\circ$, then _____.

12. The figure below is an example of a(n) _____.

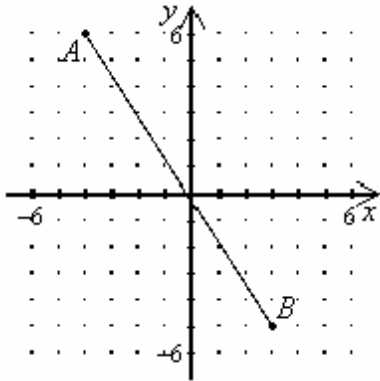


13. The figure shown below _____.

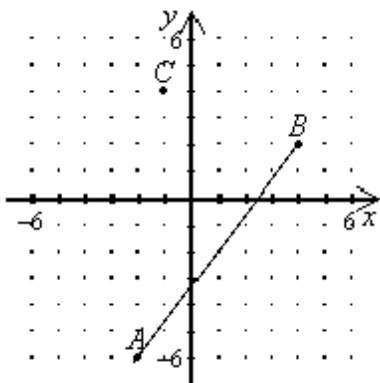


14. Name a polygon with 6 sides.

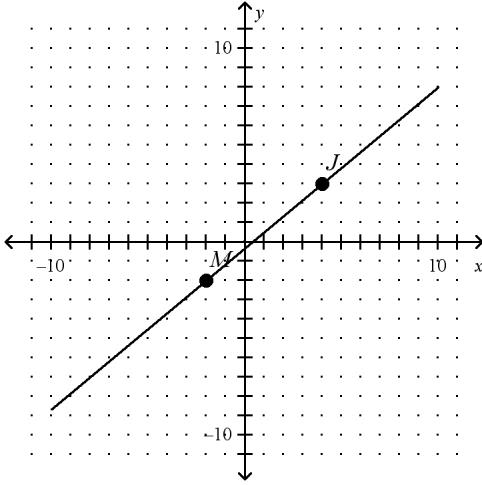
15. Find the length of \overline{AB} .



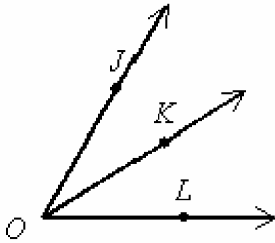
16. Find the approximate length of the segment from point C to the midpoint of \overline{AB} .



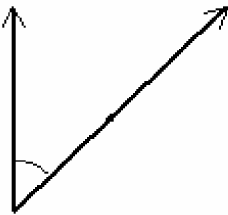
17. The midpoint of \overline{JK} is $M(-2, -2)$. One endpoint is $J(4, 3)$. Find the coordinates of the other endpoint.



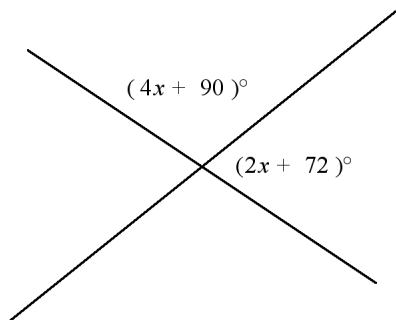
18. Determine the coordinates of the midpoint of \overline{GH} and find the approximate distance GH for the points $G(-6, -7)$ and $H(3, 6)$.
19. Find the midpoint of the segment with endpoints $(4, -3)$ and $(-6, 7)$.
20. If $m\angle JOK = 28^\circ$ and $m\angle JOL = 58^\circ$, then what is the measure of $\angle KOL$?



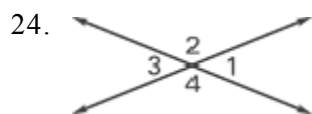
21. Classify the angle as right, acute, or obtuse.



22. Solve for x :



23. $\angle 1$ and $\angle 2$ form a linear pair. $m\angle 1 = 73^\circ$. Find $m\angle 2$.



Name a pair of vertical angles in the figure above.

25. The lengths (in inches) of two sides of a regular octagon are represented by the expressions $2x + 4$ and $3x - 8$. Find the length of a side of the octagon.

26. 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.

27. The expressions $(3x + 18)^\circ$ and $(5x - 42)^\circ$ represent two angle measures of a regular pentagon. Find the measure of an angle of the pentagon.

Multiple Choice

Identify the choice that best completes the statement or answers the question.

_____ 28. Which figure below is *not* a polygon?

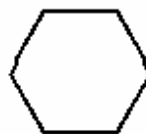
a.



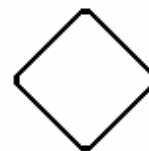
b.



c.



d.

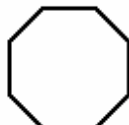


_____ 29. Which figure below is *not* a convex polygon?

a.



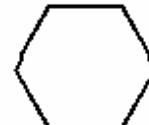
b.



c.



d.



Geometry Mastery Test #1 Review Answer Section

SHORT ANSWER

1. points T , Q , and R
2. 24
3. 13
4. $\sqrt{34}$
5. $(6, \frac{13}{2})$
6. 47°
7. $m\angle JHI = 19^\circ$ and $m\angle GHI = 46^\circ$
8. 7, 120°
9. $\angle BOD$
10. $m\angle S = 55^\circ$
11. $m\angle G = 113^\circ$
12. heptagon
13. is a pentagon
14. hexagon
15. $\sqrt{170} \approx 13.0$
16. $\sqrt{40} \approx 6.3$
17. $(-8, -7)$
18. midpoint = $(-\frac{3}{2}, -\frac{1}{2})$
distance = $\sqrt{250} \approx 15.8$
19. $(-1, 2)$
20. 30°
21. acute
22. $x = 3$
23. 107°
24. $\angle 1$ and $\angle 3$ or $\angle 2$ and $\angle 4$
25. 28 inches
26. 6 meters
27. 108°

MULTIPLE CHOICE

28. A
29. A