

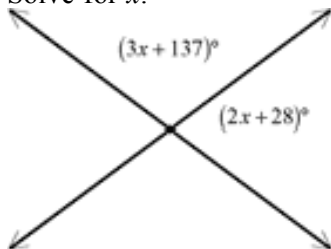
Geometry Mastery Test #2 Review

Numeric Response

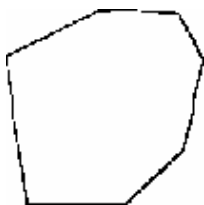
1. **GRIDDED RESPONSE** Grid the correct answer on a separate gridding sheet.

What is the next number in the sequence 0.7, 2.8, 11.2, 44.8, ...?

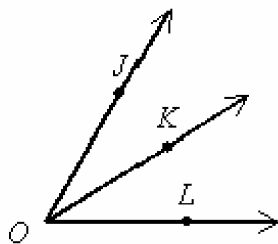
2. Solve for x .



3. $\angle 1$ and $\angle 2$ form a linear pair. If $m\angle 2 = 67^\circ$, what is $m\angle 1$?
4. The figure below is an example of a(n) _____.

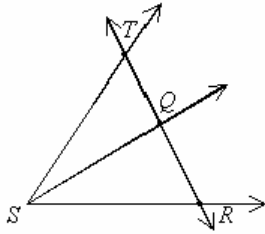


5. If $m\angle JOK = 28^\circ$ and $m\angle JOL = 58^\circ$, then what is the measure of $\angle KOL$?

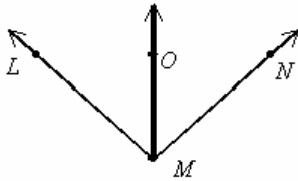


6. The expressions $5x - 4$ and $3x$ represent two side lengths (in meters) of a regular octagon. Find the length of a side of the octagon.

7. Name three points that are collinear.



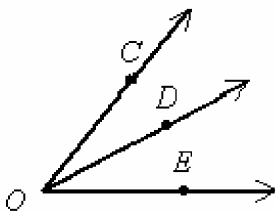
8. In the figure (not drawn to scale), \overline{MO} bisects $\angle LMN$, $m\angle LMO = (6x - 12)^\circ$, and $m\angle NMO = (x + 63)^\circ$. Solve for x and find $m\angle LMN$.



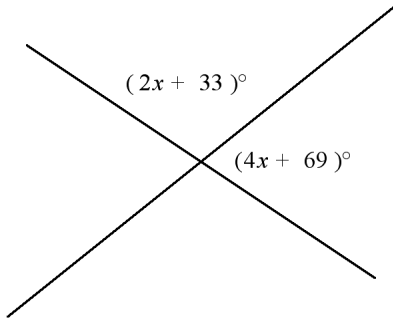
9. Find the distance between the points $(6, 0)$ and $(-2, 2)$.

Complete the conditional statement to make a true statement.

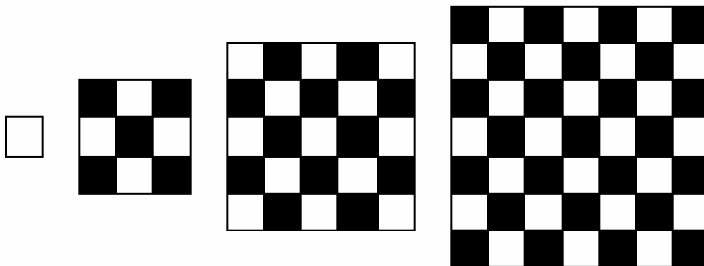
10. If $\angle R$ and $\angle S$ are complementary and $m\angle R = 15^\circ$, then _____.
11. If $\angle G$ and $\angle H$ are supplementary and $m\angle H = 69^\circ$, then _____.
12. If $m\angle COE = 51^\circ$ and $m\angle COD = 23^\circ$, then what is the measure of $\angle DOE$?



13. Solve for x :



14. Name a polygon with 4 sides.
15. Find the midpoint of the segment with endpoints $(-6, -3)$ and $(5, -7)$.
16. The midpoint of \overline{JK} is $M(-2, -6)$. One endpoint is $J(3, -4)$. Find the coordinates of the other endpoint.
17. If the pattern were continued, what would be the ratio of the number of unshaded squares to the number of shaded squares in the next figure in the pattern?



18. Provide the reasons for statements 3 and 5 in the proof.
 Given: $\angle 1$ and $\angle 2$ form a linear pair; $m\angle 2 = 100^\circ$
 Prove: $m\angle 1 = 80^\circ$

Statements	Reasons
1. $m\angle 2 = 100^\circ$	1. Given
2. $\angle 1$ and $\angle 2$ are a linear pair.	2. Given
3. $m\angle 1 + m\angle 2 = 180^\circ$	3. ?
4. $m\angle 1 + 100^\circ = 180^\circ$	4. Substitution Property of Equality
5. $m\angle 1 = 80^\circ$	5. ?

True or False:

19. Vertical angles are always complementary.

20. If two angles are supplements of the same angle, then the sum of their measures must be 180 degrees.
21. If two angles are complements of the same angle, then they are equal in measure.
22. If two angles are complements of the same angle, then their sum is always 90 degrees.

Other

Use inductive reasoning to find the next two numbers in each pattern.

23. 3, 6, 12, 24, __, __
24. -10, -7, -4, -1, __, __
25. 2, 3, 5, 8, __, __
26. Identify the hypothesis and conclusion of the statement.
If today is Tuesday, then yesterday was Monday.

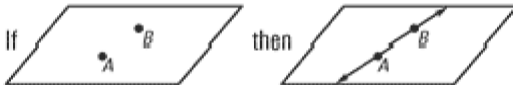
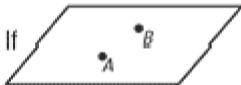
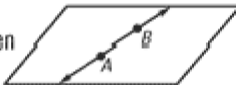
Write the converse of the following statement(s). Then tell whether the converse is True or False.

27. If $x > 0$, then $x^3 > 0$.

From the given true statements, make a valid conclusion:

28. If Ahmed can get time off work, he will go to Belize.
If Ahmed goes to Belize, Jake will go with him. Ahmed will get time off work.
29. If Isaiah walks the tightrope, he will fall.
If Isaiah falls, he will get hurt.
30. If the dogs get out of the yard, the catcher will take them to the pound.
The dogs got out of the yard.

State the postulate indicated by the diagram.

31.  If  then 

Identify the property that makes the statement true.

32. If $XY = MN$, then $MN = XY$.
33. If $MP = PQ$ and $PQ = QR$, then $MP = QR$.

Geometry Mastery Test #2 Review Answer Section

NUMERIC RESPONSE

1. 179.2

SHORT ANSWER

2. 3

3. 113°

4. heptagon

5. 30°

6. 6 meters

7. points T , Q , and R

8. 15, 156°

9. $2\sqrt{17}$

10. $m\angle S = 75^\circ$

11. $m\angle G = 111^\circ$

12. 28°

13. $x = 13$

14. quadrilateral

15. $(-\frac{1}{2}, -5)$

16. $(-7, -8)$

17. $\frac{41}{40}$

18. 3. Linear Pair Postulate

5. Subtraction Property of Equality

19. False

20. False

21. True

22. False

OTHER

23. 48, 96

24. 2, 5

25. 12, 17

26. hypothesis: today is Tuesday, conclusion: yesterday was Monday

27. If $x^3 > 0$, then $x > 0$. True

28. Ahmed will go to Belize, and Jake will go with him.

29. If Isaiah walks the tightrope, he will get hurt.

30. The catcher will take them to the pound.

31. If two points lie in a plane, then the line containing them lies in the plane.
32. Symmetric Property of Equality
33. Transitive Property of Equality