

Grade Recovery Packet

Due: March 2nd

Show ALL of Your Work.
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Name: _____

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Class Period: _____

Name: _____

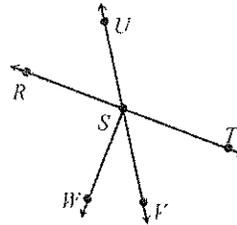
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SHOW ALL WORK NEEDED TO ANSWER EACH QUESTION! Good Luck! 😊

1. \overline{QR} is located at $Q(-5, -8)$ and $R(-1, 3)$. Which pair of points would form a segment congruent to \overline{QR} ?

- A. (7, 4) and (-3, 5)
- B. (-10, 2) and (-1, 6)
- C. (3, -5) and (1, -6)
- D. (-4, 9) and (7, 5)

2. If $\overline{SW} \perp \overline{RT}$, $m\angle RSU = (5x + 17)^\circ$, and $m\angle VST = (9x - 11)^\circ$, find $m\angle WSV$.

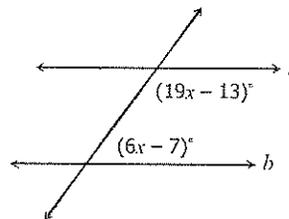


- A. 34°
- B. 38°
- C. 52°
- D. 66°

3. A regular pentagon has what type of symmetry?

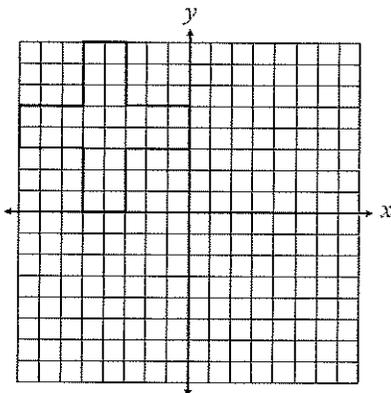
- A. Line symmetry only
- B. Point symmetry only
- C. Both point and line symmetry
- D. Neither point nor line symmetry

4. What value of x would prove $a \parallel b$?



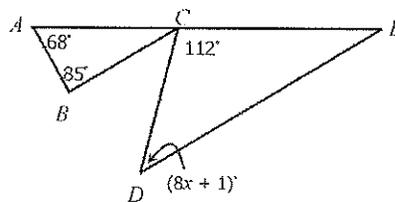
- A. 8
- B. 9
- C. 10
- D. 11

5. Which is not a line of symmetry in the figure below?



- A. $x = -4$
- B. $y = 4$
- C. $y = x$
- D. $y = -x$

6. If $\overline{BC} \parallel \overline{DE}$, find the value of x .

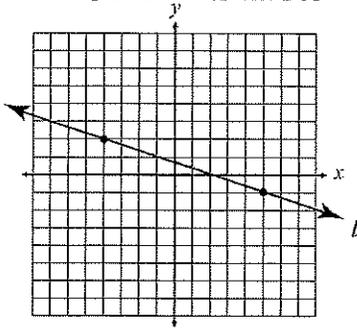


- A. 3
- B. 4
- C. 5
- D. 6

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7. The graph of line l is shown below. Which of the following represents the slope of a line parallel to line l ?



- A. -3
- B. 3
- C. $-\frac{1}{3}$
- D. $\frac{1}{3}$

8. \overline{JK} has coordinates $J(-3, 9)$ and $K(5, -1)$. If \overline{LM} is perpendicular to \overline{JK} , what is the slope of \overline{LM} ?

- A. $\frac{4}{5}$
- B. $-\frac{4}{5}$
- C. $\frac{5}{4}$
- D. $-\frac{5}{4}$

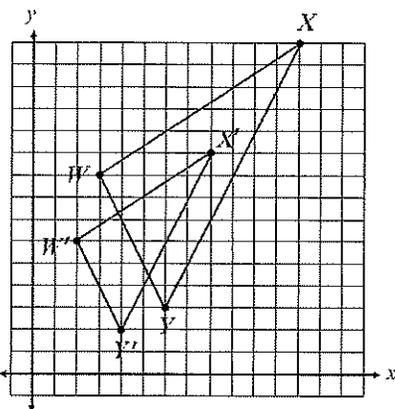
9. Which equation represents a line parallel to $y = -2x + 9$?

- A. $2x - 4y = 28$
- B. $2x + 4y = 28$
- C. $4x - 2y = 10$
- D. $4x + 2y = 10$

10. Which proves as a non-example to the statement "All capital letters have at least one line of symmetry."

- A. S
- B. C
- C. Y
- D. H

11. Identify the scale factor that was used to graph $\triangle W'X'Y'$.



- A. $\frac{1}{2}$
- B. $\frac{1}{3}$
- C. $\frac{2}{3}$
- D. $\frac{3}{2}$

12. Which is the converse of the statement "If a quadrilateral is a square, then its diagonals are perpendicular."?

- A. If a quadrilateral is not a square, then its diagonals are not perpendicular.
- B. If the diagonals of a quadrilateral are perpendicular, then it is a square.
- C. If the diagonals of a quadrilateral are not perpendicular, then it is not a square.
- D. If a quadrilateral is not a square, then its diagonals are perpendicular.

13. Rhombus $STUV$ is located at $S(-5, 4)$, $T(-1, 5)$, $U(-2, 1)$, and $V(-6, 0)$. If $STUV$ is translated along the rule $(x, y) \rightarrow (x + 7, y - 8)$, which quadrant will the new rhombus be located?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

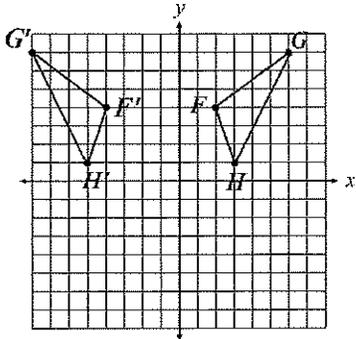
14. Which of the following statements is false?

- A. Two circles are congruent if and only if they have the same radius.
- B. The product of two numbers is even if and only if both numbers are even.
- C. Today is Monday if and only if yesterday was Sunday.
- D. Two lines are parallel if and only if they have the same slope.

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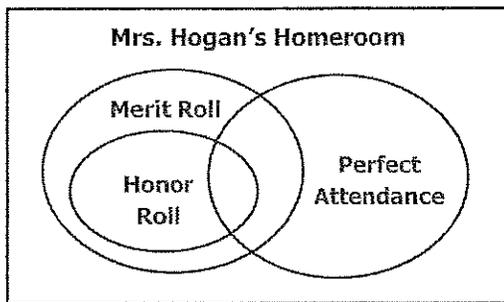
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15. Which transformation was used to map $F'G'H'$?



- A. Reflection over $x = -1$
- B. Reflection over $y = -1$
- C. Rotation 90° counterclockwise about the origin.
- D. Rotation 270° counterclockwise about the origin.

16. The Venn diagram below shows the relationship of first quarter awards given to students in Mrs. Hogan's homeroom class. Which statement is false?



- A. All students who made honor roll also made merit roll.
- B. Some students who had perfect attendance also made honor roll.
- C. All students on merit roll also made honor roll.
- D. Some students are on merit roll, honor roll, and had perfect attendance.

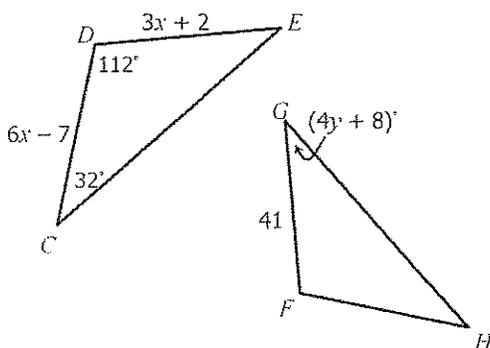
17. Two sides of a triangle measure 18 meters and 13 meters. Which of the following measures could represent the perimeter of the triangle?

- A. 34 meters
- B. 37 meters
- C. 62 meters
- D. 68 meters

18. Park Street, Scott Street, and Oak Street form a triangle. If the angle formed by Oak Street and Park Street is 62° and the angle formed by Park Street and Scott Street is 58° , which lists the sides of the triangle from least to greatest?

- A. Park Street, Oak Street, Scott Street
- B. Scott Street, Park Street, Oak Street
- C. Scott Street, Oak Street, Park Street
- D. Oak Street, Park Street, Scott Street

19. Which values of x and y make $\triangle CDE \cong \triangle HFG$?

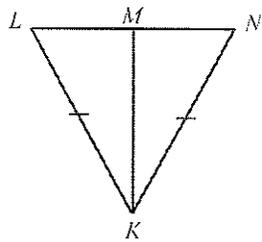


- A. $x = 8, y = 6$
- B. $x = 8, y = 7$
- C. $x = 13, y = 6$
- D. $x = 13, y = 7$

You should not be getting help on this!

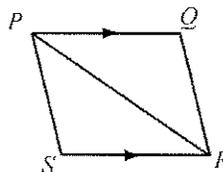
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20. What additional piece of information would prove $\triangle LMK \cong \triangle NMK$ by Side-Angle-Side?



- A. M is the midpoint of \overline{LN}
- B. $\angle LMK \cong \angle NMK$
- C. $\angle MLK \cong \angle MNK$
- D. \overline{MK} bisects $\angle LKN$

21. Using the information given on the diagram, which congruence postulate or theorem can be used to prove $\triangle PSR \cong \triangle RQP$?

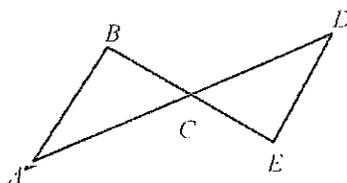


- A. Side-Side-Side
- B. Side-Angle-Side
- C. Angle-Side-Angle
- D. Angle-Angle-Side

A partial proof is given below. Use the information given to complete questions 22-25.

Given: $\overline{AB} \parallel \overline{DE}$; C is the midpoint of \overline{BE}

Prove: $\triangle ABC \cong \triangle DEC$



Statements	Reasons
1. $\overline{AB} \parallel \overline{DE}$ C is the midpoint of \overline{BE}	1. Given
2. $\angle BAC \cong \angle EDC$	2.
3. $\overline{AC} \cong \overline{CE}$	3.
4. $\angle BCA \cong \angle DCE$	4.
5. $\triangle ABC \cong \triangle DEC$	5.

22. Which reason justifies statement 2?

- A. Vertical Angles
- B. Alternate Interior Angles
- C. Corresponding Angles
- D. Consecutive Interior Angles

23. Which reason justifies statement 3?

- A. Reflexive Property
- B. Transitive Property
- C. Definition of Midpoint
- D. Definition of Congruent Sides

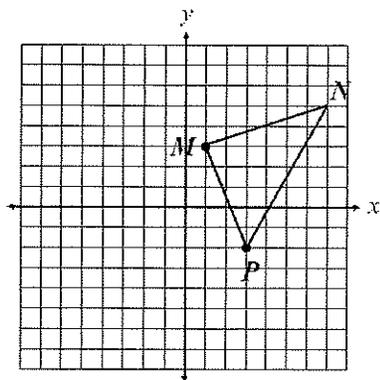
24. Which reason justifies statement 4?

- A. Vertical Angles
- B. Alternate Interior Angles
- C. Corresponding Angles
- D. Consecutive Interior Angles

25. Which reason justifies statement 5?

- A. Side-Side-Side
- B. Side-Angle-Side
- C. Angle-Side-Angle
- D. Angle-Angle-Side

26. $\triangle MNP$ is shown on the graph below. If $\triangle QRS$ has coordinates $Q(-6, -7)$ and $R(-8, -1)$, what could be the coordinates of S if $\triangle MNP \cong \triangle QRS$?

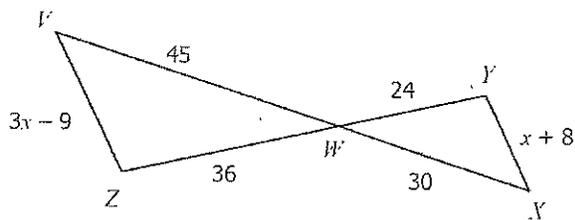


- A. $(-2, -2)$
- B. $(-1, -5)$
- C. $(-3, 1)$
- D. $(0, -6)$

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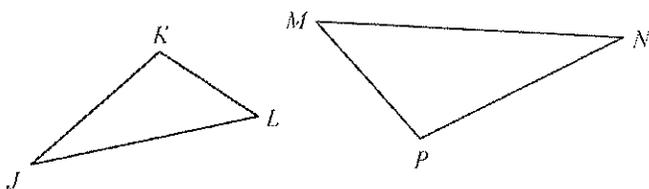
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27. If $\triangle VWZ \sim \triangle XWY$, find the length of \overline{YX} .



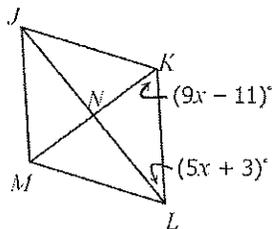
- A. 14
- B. 18
- C. 20
- D. 22

28. If $\angle K \cong \angle P$, which additional piece of information is sufficient to prove $\triangle JKL \sim \triangle NPM$ by Side-Angle-Side Similarity?



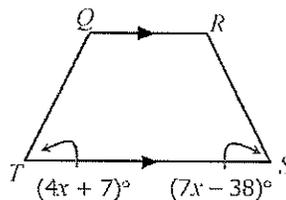
- A. $\frac{JK}{NP} = \frac{JL}{NM}$
- B. $\frac{KL}{PM} = \frac{JL}{NM}$
- C. $\frac{JK}{NP} = \frac{KL}{PM}$
- D. $\frac{JK}{JL} = \frac{NP}{NM}$

29. Rhombus $JKLM$ is shown below. Find $m\angle KLM$.



- A. 36°
- B. 38°
- C. 72°
- D. 76°

30. If $QRST$ is an isosceles trapezoid, find $m\angle R$.

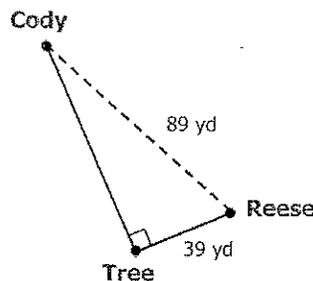


- A. 107°
- B. 113°
- C. 118°
- D. 125°

31. Given the side measures, which of the following could form a right triangle?

- A. 61 m, 60 m, 11 m
- B. 24 in, 34 in, 28 in
- C. 55 ft, 45 ft, 35 ft
- D. 48 cm, 46 cm, 15 cm

32. The diagram shows the locations of Cody and Reese after running different directions from a tree. How far did Cody run?

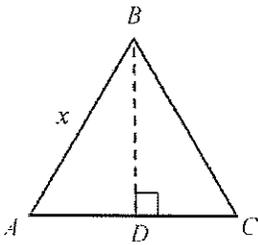


- A. 50 yd
- B. 64 yd
- C. 75 yd
- D. 80 yd

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33. If $\triangle ABC$ is an equilateral triangle and $BD = 36$ inches, find the value of x .

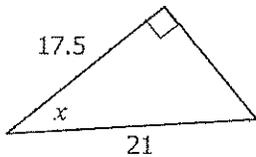


- A. $12\sqrt{3}$
- B. $18\sqrt{3}$
- C. $24\sqrt{3}$
- D. $36\sqrt{3}$

34. If the perimeter of a square is 68 feet, find the approximate length of its diagonal.

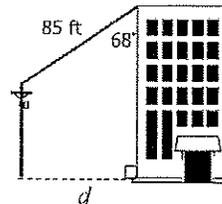
- A. 17 feet
- B. 24 feet
- C. 38 feet
- D. 48 feet

35. Which angle measure is closest to the value of x ?



- A. 39.8°
- B. 50.1°
- C. 56.4°
- D. 33.6°

36. An 85 foot wire is tied from the top of a utility pole to the top of the building as shown below. Find d , the distance from the pole to the building.



- A. 75.2 ft
- B. 78.8 ft
- C. 80.5 ft
- D. 82.1 ft

37. Jayden is on his boat riding through the Cooper River. He spots the Cooper River Bridge at an angle of elevation of 42° . If the bridge stands 761 feet above Jayden's viewing point on the boat, what is the horizontal distance from Jayden to the bridge?

- A. 804.7 feet
- B. 845.2 feet
- C. 893.4 feet
- D. 915.1 feet

38. If the sum of the interior angle measures of a convex polygon is $2,160^\circ$, how many sides does the polygon have?

- A. 12 sides
- B. 13 sides
- C. 14 sides
- D. 15 sides

39. If each interior angle of a regular hexagon measures $(13x + 3)^\circ$, find the value of x .

- A. $x = 9$
- B. $x = 10$
- C. $x = 11$
- D. $x = 12$

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