

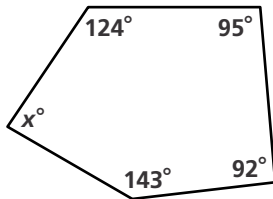
Mid-Course Test

Form A

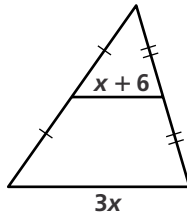
Chapters 1–6

1. Find the next two terms in the sequence.
1, 3, 7, 15, 31, ...

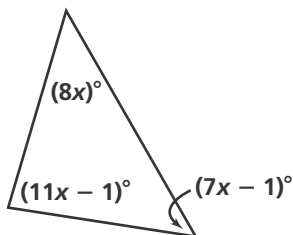
2. Find the value of x .



3. Find the value of x .

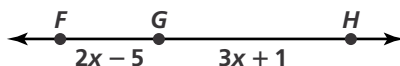


4. Find the value of x .



5. Graph quadrilateral $ABCD$ with vertices $A(-5, 2)$, $B(-5, -3)$, $C(2, -3)$, and $D(2, 2)$ to determine its most precise name.

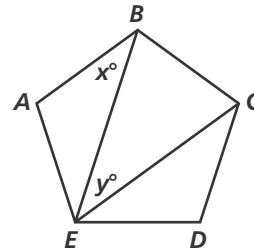
6. $FH = 56$. Find the value of x .



7. Give the coordinates of four points that determine a parallelogram.

8. In $\triangle ABC$, $AB = 12$, $BC = 15$, and $AC = 22$. List the angles from largest to smallest.

9. Find the values of the variables, given that $ABCDE$ is a regular pentagon.



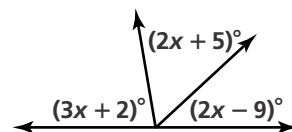
10. Statement: If it is sunny, then it is summer.

- a. Write the converse of the statement.
b. Write the inverse of the statement.

11. Which pair of lines is perpendicular?

- A. $y = 2x - 5$
B. $y = \frac{2}{3}x + 1$
 $y = 2x + 3$
 $y = \frac{3}{2}x + 1$
C. $y = 3x + 5$
D. $y = 4x - 5$
 $y = -\frac{1}{3}x - 8$
 $y = -4x + 2$

12. Find the value of x .

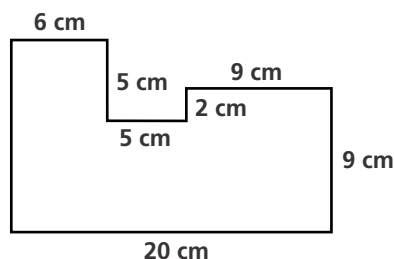


Mid-Course Test (continued)

Form A

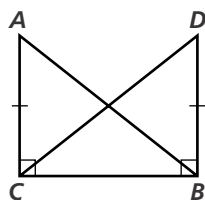
Chapters 1–6

13. Find the perimeter.

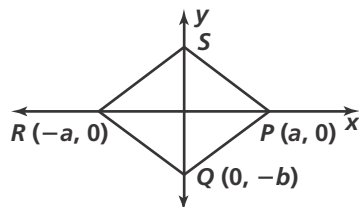


14. What is the measure of an exterior angle of a regular hexagon?

15. Name a pair of overlapping congruent triangles. State whether the triangles are congruent by SSS, SAS, ASA, AAS, or HL.

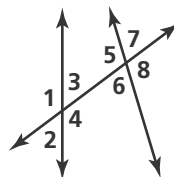


16. For rhombus $PQRS$, give the coordinates of S without using any new variables.

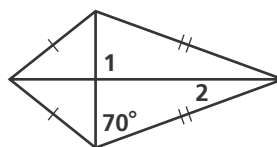


17. Refer to the diagram.

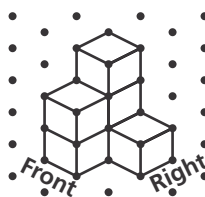
- a. Name a pair of same-side interior angles.
b. Name a pair of corresponding angles.



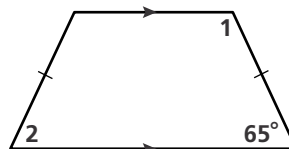
18. Find $m\angle 1$ and $m\angle 2$.



19. Create a foundation drawing from the isometric drawing.



20. Find the measures of $\angle 1$ and $\angle 2$.



Mid-Course Test (continued)

Form A

Chapters 1–6

Complete each statement with the word *always*, *sometimes*, or *never*.

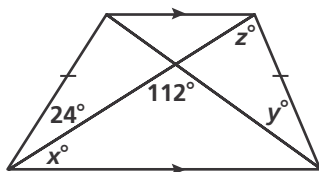
21. The diagonals of a parallelogram ? bisect each other.

22. An isosceles trapezoid ? has two pairs of opposite sides congruent.

23. Two skew lines ? intersect.

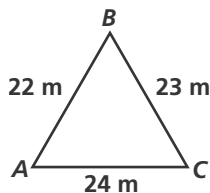
24. Two coplanar lines ? intersect.

25. Find the values of the variables.

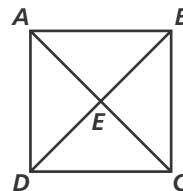


26. Explain why a rectangle is always a parallelogram, but a parallelogram is not always a rectangle.

27. List the angles of $\triangle ABC$ in order of angle measure from smallest to largest.



For Exercises 28–33, give $ABCD$ the most precise name possible. Choose from *quadrilateral*, *parallelogram*, *rectangle*, *rhombus*, *kite*, *square*, and *trapezoid*.



28. $ABCD$ is a parallelogram; $m\angle C = 90$.

29. $ABCD$ is a parallelogram; $m\angle DEA = 90$.

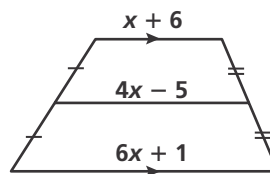
30. $ABCD$ is a parallelogram; $AD = DC$; $AC = DB$.

31. $\overline{AB} \parallel \overline{DC}$; $m\angle CBD \neq m\angle ADB$

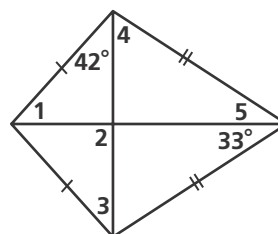
32. $AE = BE = CE = DE$

33. $\overline{AB} \cong \overline{DC}$; $\overline{AD} \cong \overline{BC}$; $\overline{AC} \perp \overline{BD}$

34. Find the value of x .



35. Find the measures of the numbered angles.

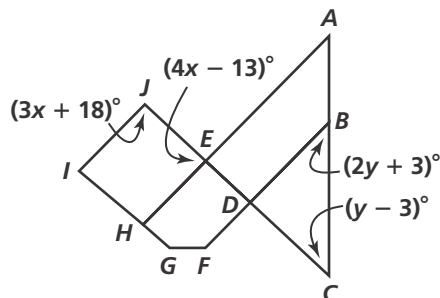


Mid-Course Test (continued)

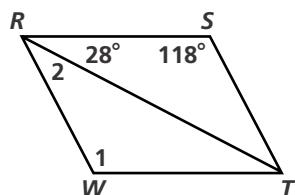
Form A

Chapters 1–6

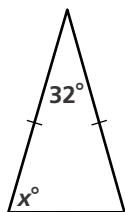
36. Find the values of the variables, given $\overline{BF} \parallel \overline{AH} \parallel \overline{IJ}$ and $\overline{IJ} \perp \overline{GI}$.



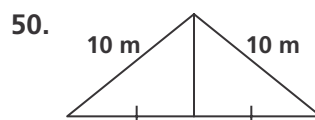
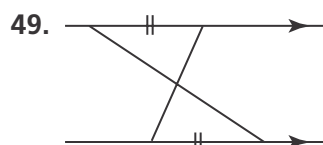
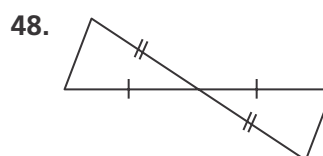
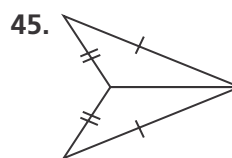
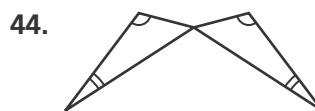
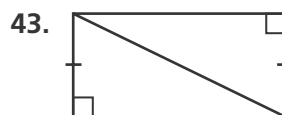
37. Find the midpoint of $\overline{AB}$ with $A(-1, 5)$ and $B(6, -3)$.
38. The lengths of two sides of a triangle are 5 and 8. Which can be the length of the third side?
F. 2 G. 13 H. 15 J. 7
39. In parallelogram $RSTW$, find $m\angle 1$ and $m\angle 2$.



40. What is the distance between $(-2, 3)$ and $(4, -1)$? Round your answer to the nearest tenth.
41. A circle has radius 12 in. Find its area and circumference to the nearest tenth.
42. Find the value of x .



For each pair of triangles, state the postulate or theorem you can use to prove the triangles congruent. If the triangles cannot be proven congruent, write *not possible*.



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