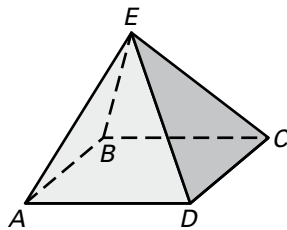


Cumulative Test 1

In Exercises 1–5, use the diagram at the right.

1. Name the intersection of \overleftrightarrow{ED} and \overleftrightarrow{CD} .
2. Name the intersection of plane ABD and plane AEB .
3. Are points B , C , and D collinear?
4. Are points E , A , and D coplanar?
5. Name two planes that intersect at line \overleftrightarrow{EC} .



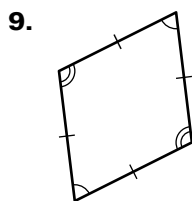
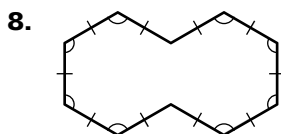
Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

In Exercises 6 and 7, the endpoints of a segment are given. Find the length of the segment rounded to the nearest tenth. Then find the coordinates of the midpoint of the segment.

6. $A(-3, 4)$ and $B(1, -8)$ 7. $F(-6, -7)$ and $G(5, -3)$

Classify the polygon by the number of sides. Tell whether the polygon is equilateral, equiangular, or regular.



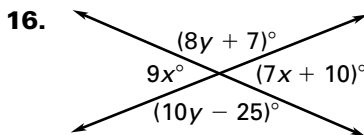
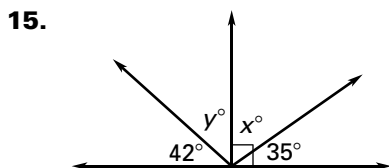
Write the next three numbers in the pattern.

10. 3072, 768, 192, 48, ... 11. 6, 4, 0, -6, ...
12. Write the contrapositive of the conditional statement “Senators are politicians.” Is the statement *true* or *false*?

Use the property to complete the statement.

13. Symmetric Property of Equality: If $m\angle G = m\angle H$, then $\underline{\quad? \quad}$.
14. Transitive Property of Congruence: If $\angle C \cong \angle D$, and $\angle \underline{\quad? \quad} \cong \angle \underline{\quad? \quad}$, then $\angle C \cong \angle E$.

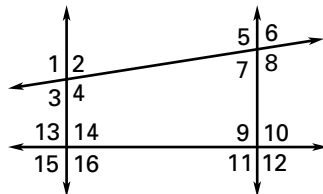
Find the values of x and y .



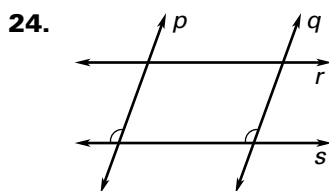
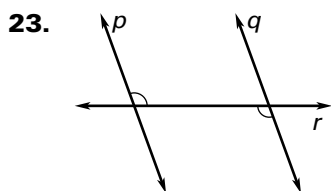
Cumulative Test 1 *continued*

Classify the angle pair as *corresponding*, *alternate interior*, *alternate exterior*, or *consecutive interior* angles.

- 17. $\angle 7$ and $\angle 10$
- 18. $\angle 2$ and $\angle 15$
- 19. $\angle 4$ and $\angle 14$
- 20. $\angle 5$ and $\angle 9$
- 21. $\angle 11$ and $\angle 6$
- 22. $\angle 7$ and $\angle 10$



Is there enough information to prove $p \parallel q$? If so, state the postulate or theorem you would use.



Find the slope of the line that passes through the points.

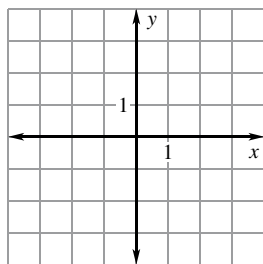
- 25. $(-4, -2), (2, 6)$
- 26. $(-3, 7), (1, -5)$
- 27. $(8, 1), (-5, 0)$

Write an equation of the line with the given slope m and y -intercept b .

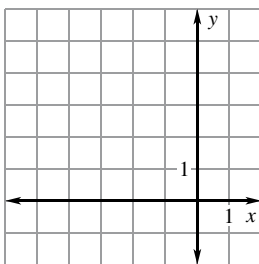
- 28. $m = -2, b = 3$
- 29. $m = 4, b = -1$
- 30. $m = \frac{5}{6}, b = 2$

Graph the equation.

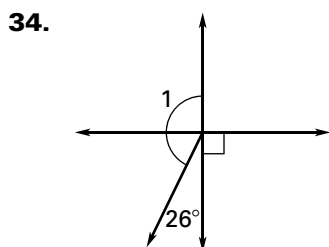
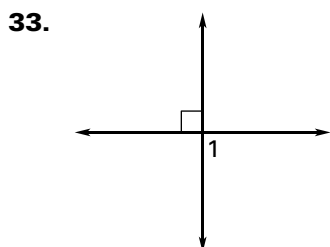
31. $6x + 2y = -4$



32. $-2x + 3y = 9$



Find $m \angle 1$.



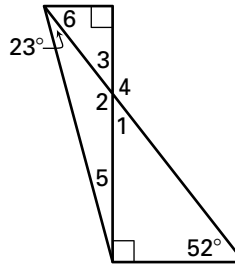
Answers

- 17. _____
- 18. _____
- 19. _____
- 20. _____
- 21. _____
- 22. _____
- 23. _____
- 24. _____
- 25. _____
- 26. _____
- 27. _____
- 28. _____
- 29. _____
- 30. _____
- 31. _____
- 32. _____
- 33. _____
- 34. _____

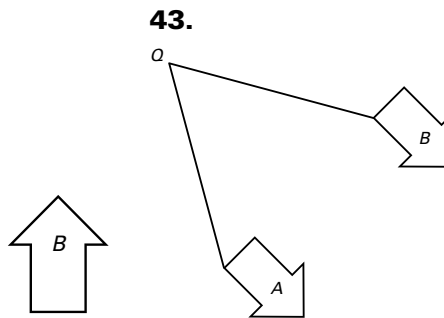
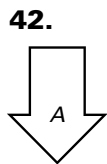
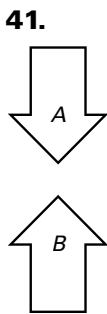
Cumulative Test 1 *continued*

Find the measure of the numbered angle.

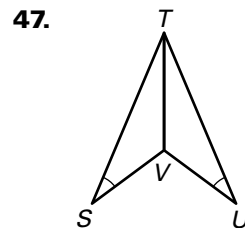
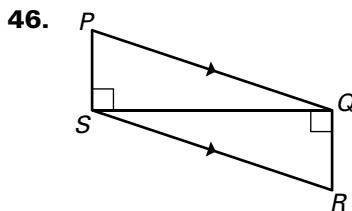
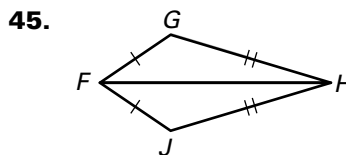
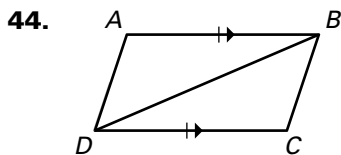
35. $\angle 1$ 36. $\angle 2$
 37. $\angle 3$ 38. $\angle 4$
 39. $\angle 5$ 40. $\angle 6$



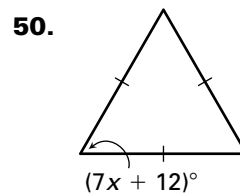
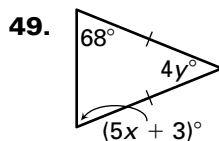
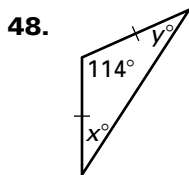
Identify the transformation(s) you can use to move figure A onto figure B.



Decide whether enough information is given to prove that the triangles are congruent. If there is enough information, state the congruence postulate or theorem you would use.



Find the values of x and y .



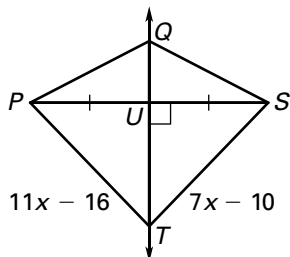
Answers

35. _____
 36. _____
 37. _____
 38. _____
 39. _____
 40. _____
 41. _____
 42. _____
 43. _____
 44. _____
 45. _____
 46. _____
 47. _____
 48. _____
 49. _____
 50. _____

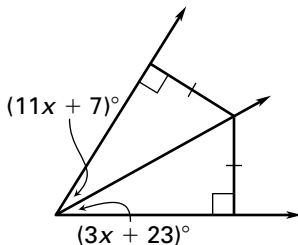
Cumulative Test 1 *continued*

Find the value of x .

51.



52.



Is it possible to construct a triangle with the given side lengths?

53. 11, 17, 29

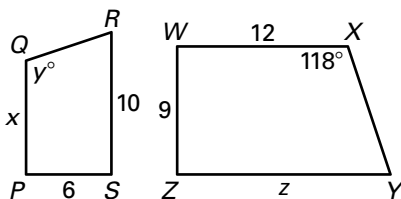
54. 30, 32, 34

55. 15, 112, 113

In the diagram, $PQRS \sim WXYZ$.

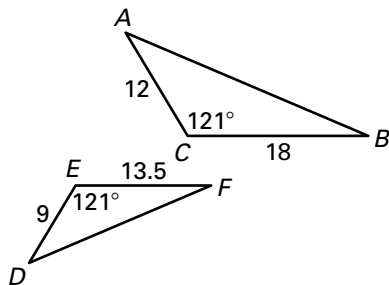
56. Find the scale factor of $PQRS$ to $WXYZ$.

57. Find the values of x , y , and z .

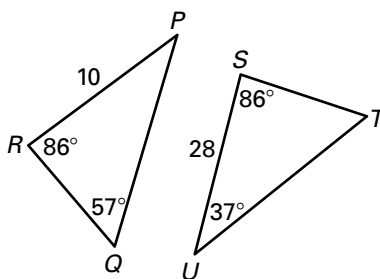


Determine whether the two triangles are similar. If they are similar, write a similarity statement.

58.



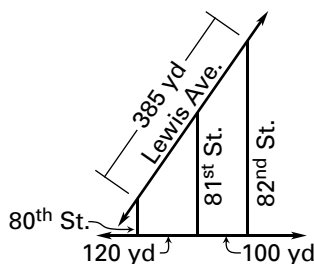
59.



Using the map shown, find the given distance.

60. along Lewis Avenue from 80th Street to 81st Street

61. along Lewis Avenue from 81st Street to 82nd Street



62. A telephone pole casts a shadow that is 90 feet long. Mack, who is standing nearby, is 6 feet tall and casts a shadow that is 18 feet long. How tall is the telephone pole?

Answers

- 51. _____
- 52. _____
- 53. _____
- 54. _____
- 55. _____
- 56. _____
- 57. _____
- 58. _____
- 59. _____
- 60. _____
- 61. _____
- 62. _____

Answers

Cumulative Test

1. point D 2. \overleftrightarrow{AB} 3. no 4. yes 5. plane ECD and plane ECB 6. 12.6; $(-1, -2)$

7. 11.7; $(-\frac{1}{2}, -5)$ 8. decagon, equilateral

9. quadrilateral, equilateral 10. 12, 3, 0.75

11. $-14, -24, -36$ 12. If you are not a politician, then you are not a senator.; true

13. $m\angle H = m\angle G$ 14. $\angle D \cong \angle E$

15. $x = 55, y = 48$ 16. $x = 5, y = 16$

17. alternate interior 18. alternate exterior

19. consecutive interior 20. corresponding

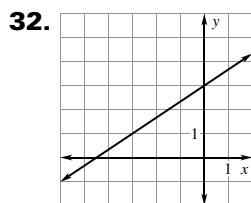
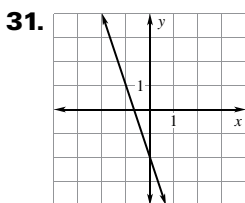
21. alternate exterior 22. alternate interior

23. yes; Alternate Interior Angles Theorem

24. yes; Corresponding Angles Converse

25. $\frac{4}{3}$ 26. -3 27. $\frac{1}{13}$ 28. $y = -2x + 3$

29. $y = 4x - 1$ 30. $y = \frac{5}{6} + 2$



33. 90° 34. 154° 35. 38° 36. 142°

37. 38° 38. 142° 39. 15° 40. 52°

41. reflection 42. Sample answer: translation and then a reflection 43. rotation about Q

44. yes; the SAS Congruence Postulate

45. yes; the SSS Congruence Postulate

46. yes; the AAS Congruence Theorem

47. not enough 48. $x = 33, y = 33$

49. $x = 13, y = 11$ 50. $x = \frac{48}{7}$ 51. $x = \frac{13}{2}$

52. $x = 2$ 53. no 54. yes 55. yes 56. $\frac{2}{3}$

57. $x = 8, y = 118^\circ, z = 15$

58. yes; $\triangle ABC \sim \triangle DFE$

59. yes; $\triangle PQR \sim \triangle UTS$ 60. 210 yd

61. 175 yd 62. 30ft