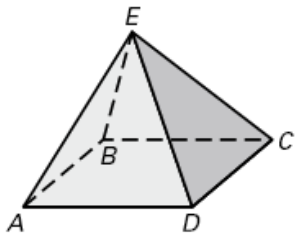
Cumulative Test 1

Name _____

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

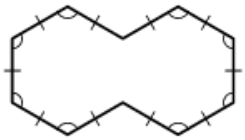
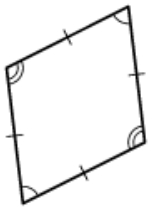
1. Name the intersection of $\overleftrightarrow{ED}$ and $\overleftrightarrow{CD}$.
2. Name the intersection of plane ABD and plane AEB.
3. Are points B, C, and D collinear?
4. Are points E, A, and D coplanar?
5. Name two planes that intersect at line $\overleftrightarrow{EC}$.



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.

8. 
9. 

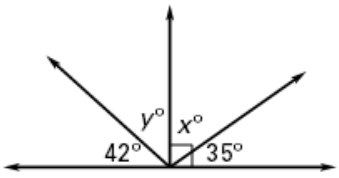
Write the next three numbers in the pattern.

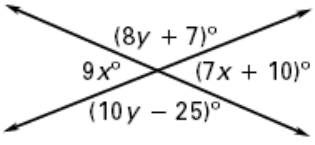
10. 3072, 768, 192, 48, . . .
11. 6, 4, 0, −6, . . .
12. Write the contrapositive of the conditional statement "Senators are politicians." Is the statement *true* or *false*?

Use the property to complete the statement.

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

Find the values of *x* and *y*.

15. 

16. 

Answers

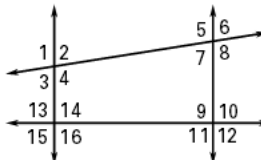
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

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 $\angle 10$



Answers

17. _____

18. _____

19. _____

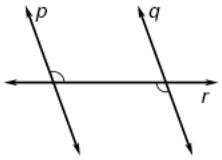
20. _____

21. _____

22. _____

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

23.



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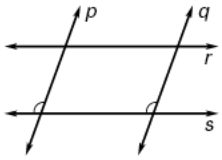


23. _____

_____

24. _____

_____

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

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

25. _____

26. _____

27. _____

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.** $m = \frac{5}{6}, b = 2$

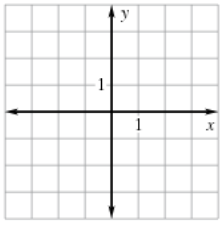
28. _____

29. _____

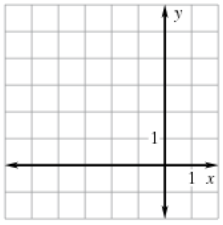
30. _____

Graph the equation.

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



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

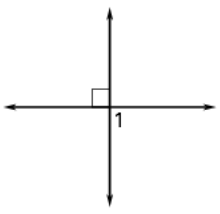


31. _____

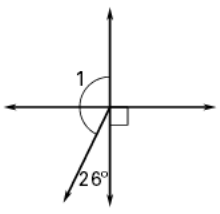
32. _____

Find $m\angle 1$.

33.



34.



33. _____

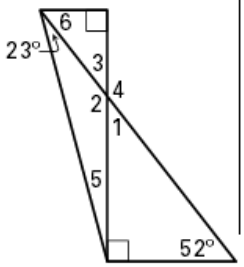
34. _____

Find the measure of the numbered angle.

35. $\angle 1$ **36.** $\angle 2$

37. $\angle 3$ **38.** $\angle 4$

39. $\angle 5$ **40.** $\angle 6$



Answers

35. _____

36. _____

37. _____

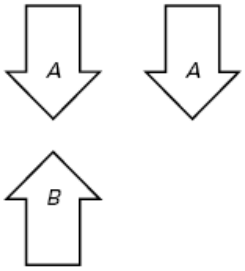
38. _____

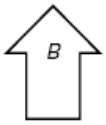
39. _____

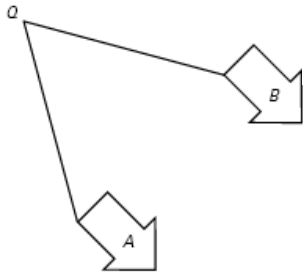
40. _____

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

41. **42.** **43.**







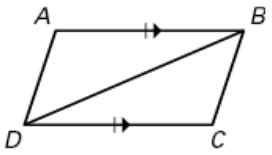
41. _____

42. _____

43. _____

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.

44.



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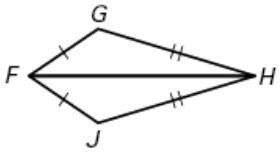

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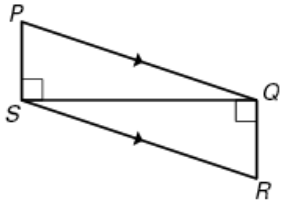


47.

44. _____

_____

45. _____

_____

46. _____

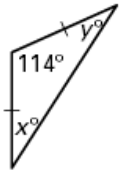
_____

47. _____

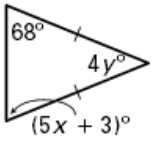
_____

Find the values of *x* and *y*.

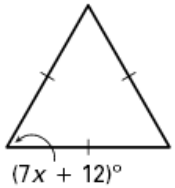
48.



49.



50.



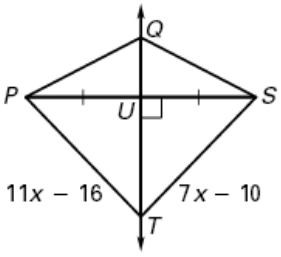
48. _____

49. _____

50. _____

Find the value of *x*.

51.



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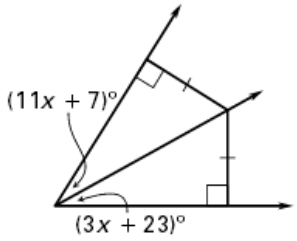


Answers

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

53. _____

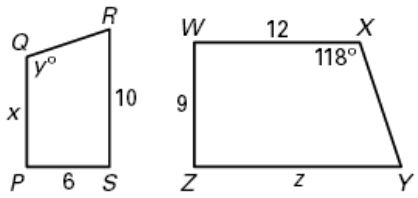
54. _____

55. _____

In the diagram, *PQRS* ~ *WXYZ*.

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

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

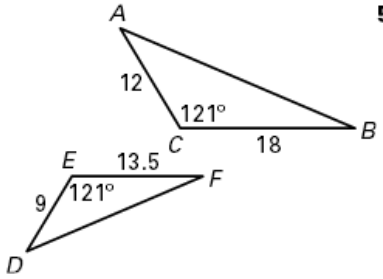


56. _____

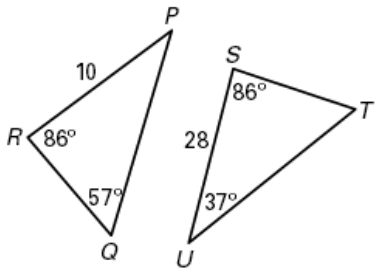
57. _____

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

58.



59.



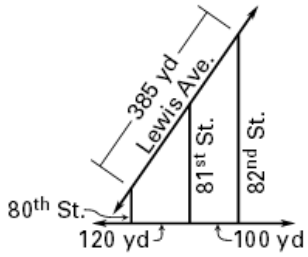
58. _____

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



60. _____

61. _____

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?

62. _____