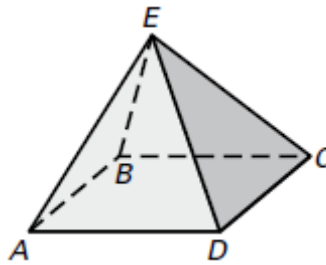


**Cumulative Test 1**

**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. \_\_\_\_\_

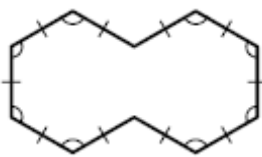
**In Exercises 6 and 7, the endpoints of a segment are given. Find the length of the segment rounded to the nearest tenth. Then find the coordinates of the midpoint of the segment.**

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

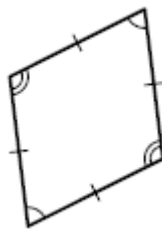
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

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

8.



9.



8. \_\_\_\_\_
9. \_\_\_\_\_

**Write the next three numbers in the pattern.**

10. 3072, 768, 192, 48, ...                      11. 6, 4, 0, -6, ...

10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_

12. Write the contrapositive of the conditional statement "Senators are politicians." Is the statement *true* or *false*?

\_\_\_\_\_

\_\_\_\_\_

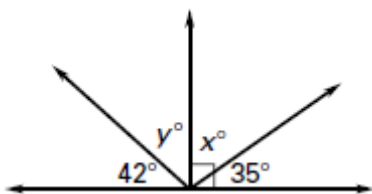
**Use the property to complete the statement.**

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  $\angle C \cong \angle E$ .

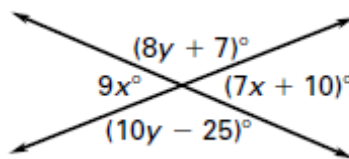
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_

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

15.



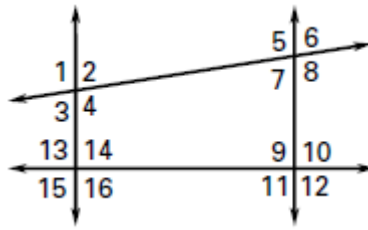
16.



16. \_\_\_\_\_

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

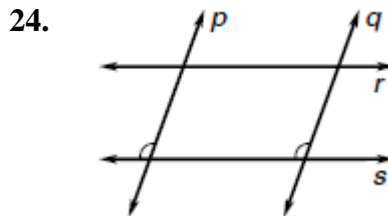
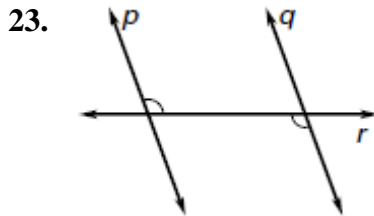
17.  $\angle 7$  and  $\angle 10$       18.  $\angle 2$  and  $\angle 15$   
 19.  $\angle 4$  and  $\angle 14$       20.  $\angle 5$  and  $\angle 9$   
 21.  $\angle 11$  and  $\angle 6$       22.  $\angle 7$  and  $\angle 10$



Answers

17. \_\_\_\_\_  
 18. \_\_\_\_\_  
 19. \_\_\_\_\_  
 20. \_\_\_\_\_  
 21. \_\_\_\_\_  
 22. \_\_\_\_\_  
 23. \_\_\_\_\_

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



24. \_\_\_\_\_  
 25. \_\_\_\_\_  
 26. \_\_\_\_\_  
 27. \_\_\_\_\_  
 28. \_\_\_\_\_  
 29. \_\_\_\_\_

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

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

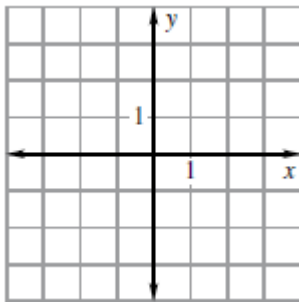
Write an equation of the line with the given slope  $m$  and  $y$ -intercept  $b$ .

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

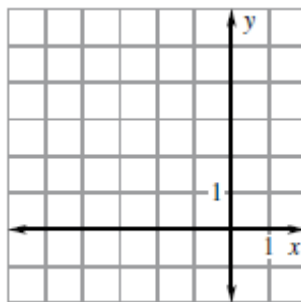
30. \_\_\_\_\_  
 31. \_\_\_\_\_  
 32. \_\_\_\_\_  
 33. \_\_\_\_\_  
 34. \_\_\_\_\_

Graph the equation.

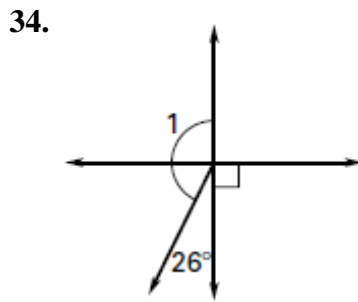
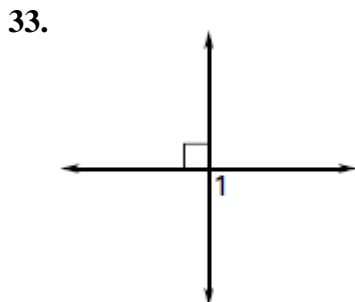
31.  $6x + 2y = -4$



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

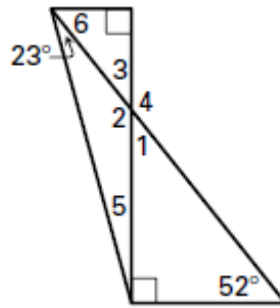


Find  $m \angle 1$ .



Find the measure of the numbered angle.

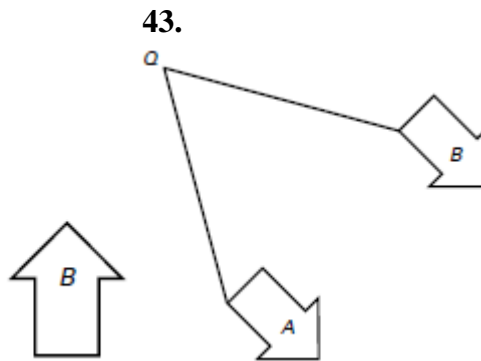
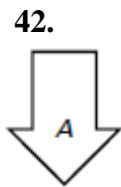
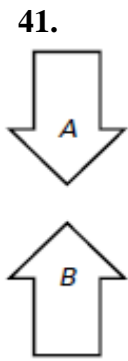
35.  $\angle 1$                       36.  $\angle 2$   
 37.  $\angle 3$                       38.  $\angle 4$   
 39.  $\angle 5$                       40.  $\angle 6$



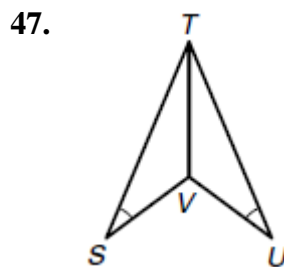
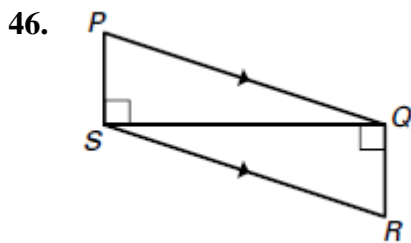
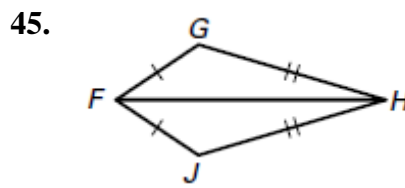
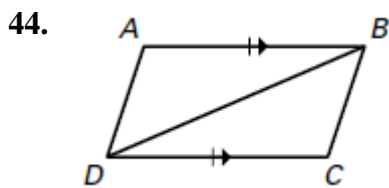
Answers

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

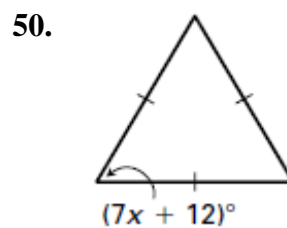
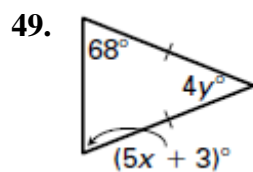
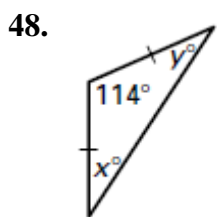
Identify the transformation(s) you can use to move figure A onto figure B.



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.

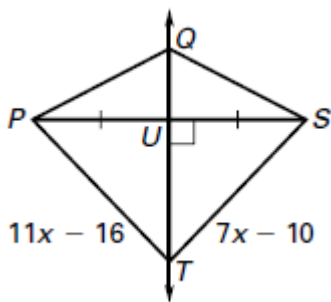


Find the values of  $x$  and  $y$ .

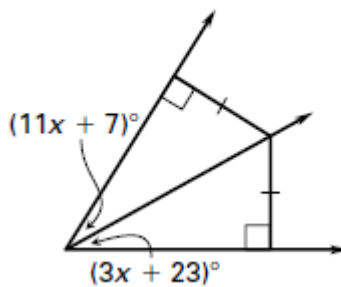


Find the value of  $x$ .

51.



52.



Answers

51. \_\_\_\_\_  
 52. \_\_\_\_\_  
 53. \_\_\_\_\_  
 54. \_\_\_\_\_  
 55. \_\_\_\_\_

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

53. 11, 17, 29      54. 30, 32, 34      55. 15, 112, 113

1. point D    2.  $\overline{AB}$     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.  $x = 5, y = 16$

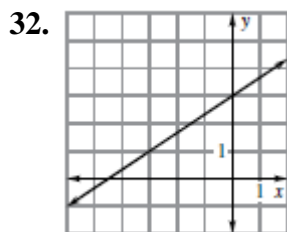
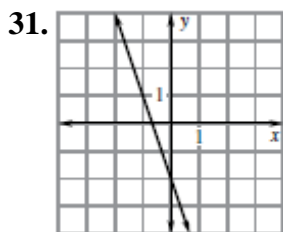
17. alternate interior    18. alternate exterior    19. consecutive interior    20. corresponding

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.  $90^\circ$     34.  $154^\circ$     35.  $38^\circ$     36.  $142^\circ$     37.  $38^\circ$     38.  $142^\circ$     39.  $15^\circ$  40.  $52^\circ$

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