Name _____ Class _____

Pre-Algebra Final Exam STUDY GUIDE

Write each phrase as an algebraic expression.

1. the quotient of 13 and z

2. Beer Bakery baked 56 cinnamon rolls and separated them evenly onto trays. Write an algebraic expression to represent the number of cinnamon rolls on *n* trays.

Solve. Simplify if necessary.

3. -9p = 54

4. h + 5.3 = 15.26

Simplify the expression.

5. 8x + 12x

6. 4x + 7y – x + 8y

Solve.

7. 3x + 7 = 19

8. $\frac{2}{5}x + 13 = 25$

9. 5x – 10 + 3x = 6

10. 3(x + 2) = 18

11. 14x – 4x + 9 = 2(5x + 3)

12. 2(x + 4) = 2x + 8

13. 6x + 4 = 2x + 8

14. $x^2 = 25$

15. $x^3 = 85$

16. $3x^3 – 4 = 95$

Solve the inequalities.

17. x + 7 < 9

18. $2x \leq 18$

19. 5x – 8 > 22

Determine whether the ordered pair is a solution of the given equation.

20. (6, 5) for y = 5x – 25

21. The equation that gives the cost "c" of mailing a large envelope is **c = 0.17w + 0.63**, where "w" is the weight in ounces. What is the cost of mailing a **6-ounce** envelope?

Name _____ Class _____

Pre-Algebra Final Exam STUDY GUIDE

Create a relationship according to the following descriptions.

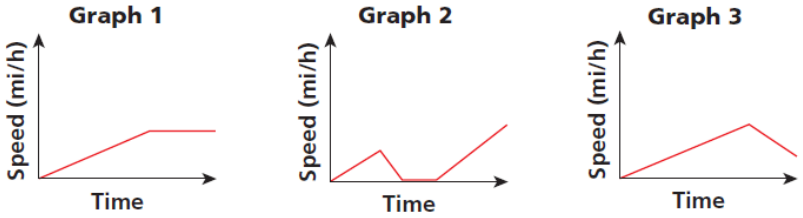
22. a graph that IS NOT a function

23. a mapping diagram that IS a function

24. a table that IS NOT a function

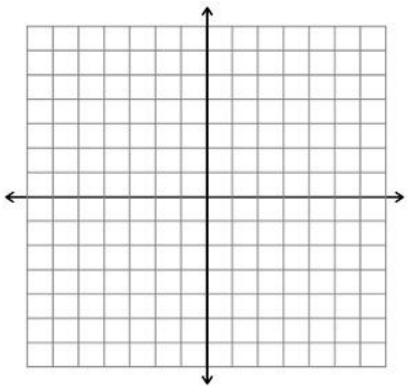
Tell which graph corresponds to the situation.

25. David begins his ride slowly but then stops to talk to some friends. After a few minutes, he continues his ride, gradually increasing his speed.

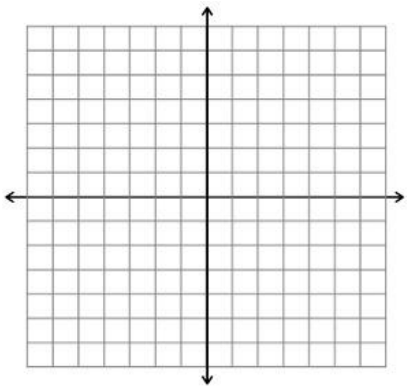


Graph the equations.

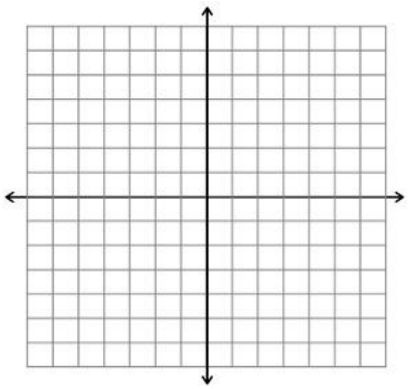
26. y = 3x + 4



27. $y = \frac{3}{4}x - 1$



28. y = -2x + 1



Find the slope of the line that passes between the two points.

29. (4, 3) and (1, 6)

Find the slope of the line in the table.

30.

x	y
0	7
1	5
2	3
3	1

Name _____ Class _____

Pre-Algebra Final Exam STUDY GUIDE

Write the equation of the line in slope-intercept form (y=mx+b) given the slope and the y-intercept.

31. m = 8 and b = 2

Write the equation of the line in slope-intercept form (y=mx+b) given the slope and a point.

32. m = 10 and (2, 5)

Are the following linear or not?

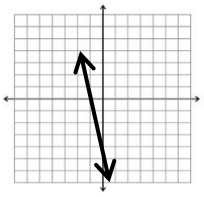
33. $y = 5x + 1$

34. $y = 2x^3 + 5x^2$

35.

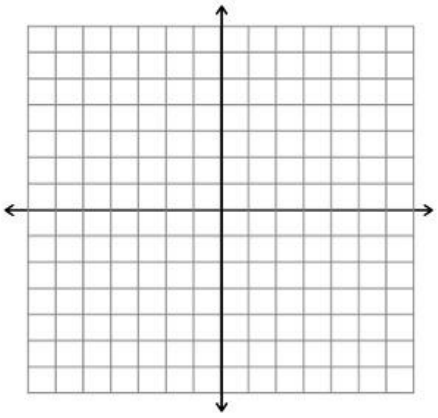
x	y
1	1
2	8
3	15
4	22

36.

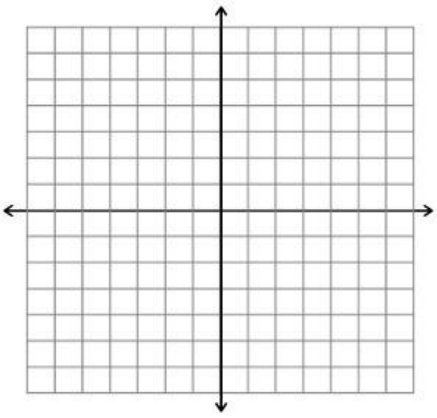


Graph the 2-variable inequalities.

37. $y < \frac{1}{4}x - 1$

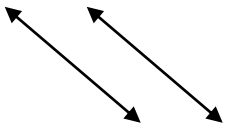


38. $y \geq 3x + 2$

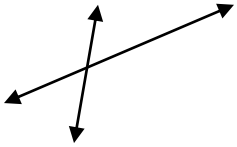


Identify the pairs of lines as <u>parallel</u> (||), <u>perpendicular</u> (⊥), or <u>neither</u>.

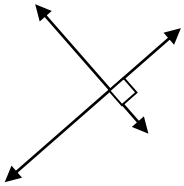
39.



40.

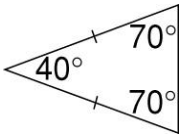


41.



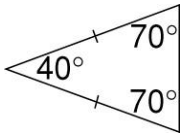
Classify the triangle by angles.

42.



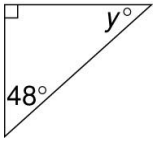
Classify the triangle by sides.

43.



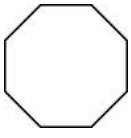
Find the missing angle measure.

44.



Name the polygon.

45.



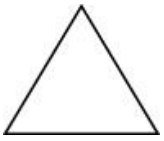
Name _____ Class _____

Pre-Algebra Final Exam STUDY GUIDE

Find the <u>sum</u> of the angle measures in the polygon.

46. a pentagon

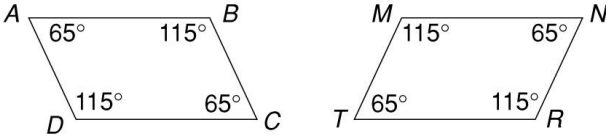
Find the measure of <u>each</u> angle in the regular polygon.

47. 

Give the <u>most specific name</u> for the quadrilateral.

48. 

Write a congruence statement for the pair of polygons.

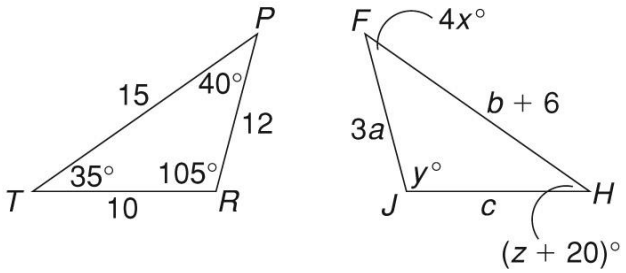
49. 

In the figure, triangle *PRT* ≅ triangle *FJH*.

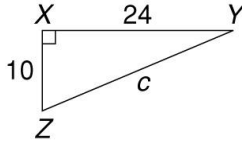
50. Find a.

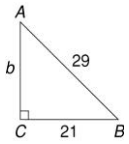
51. Find b.

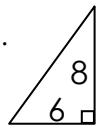
52. Find c.



Solve for the unknown side in each right triangle. Round to the nearest tenth if necessary. Use Pythagorean Triples if you can.

53. 

54. 

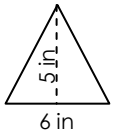
55. 

Solve. Round to the nearest tenth if necessary.

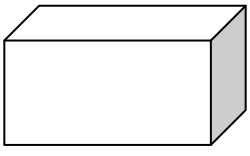
56. A ship leaves port and sails 12 km west then 19 km north. How far is the ship from the port?

57. A wire is stretched from the top of an 8-foot pole to a bracket 5 feet from the base of the pole. How long is the wire?

Find the area.

58. 

Name the 3D figure.

59. 

Find the volume.

60.