Name_____ Date _____ Pd_____

Algebra 1 Quarter I Test REVIEW

Write an algebraic expression for each verbal expression.

1. Write an algebraic expression for *the sum of 2 and a number*.

2. Write an algebraic expression for *7 less than a number*.

3. Write an algebraic expression for *three times the sum of a number and 4.*

Simplify the expression.

4. $8(-5g + 3)$.

5. $4(5a + 2b) + 3(5a + 9b)$

6. $8x^4 + 5x^4 + 3y^3$

7. $4xy - 2(5xy - 5x)$

8. Solve $4x - 2y = y$ for x.

9. $-\frac{2}{3}k = -30$.

10. $21 - x = 20$

11. $3 + 5y = 43$

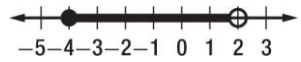
12. $5(3r - 2) = -6(r + 8)$

13. $(5x^2 + 6x + 4) + (20x^2 - 4x - 10)$

14. $(2x^2y - 5xy + 5xy^2) - (8x^2y + 5xy - 5xy^2)$

15. Which of the following is the graph of the solution set of $t - 4 \geq 4t + 8$ or $3t > 14 - 4t$?

A



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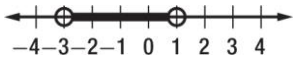

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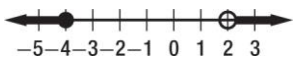

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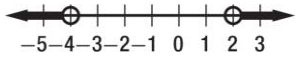
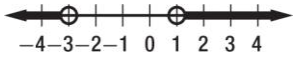


16. Which of the following is the graph of the solution set of $y < -3$ or $y < 1$?

F



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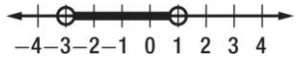

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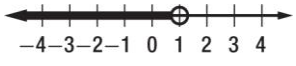

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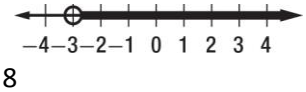
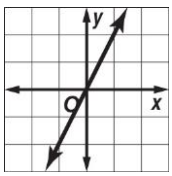


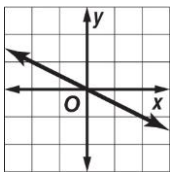
17. Solve $5(r + 6) = t$ for r

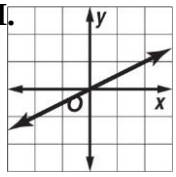
Graphing Linear Functions

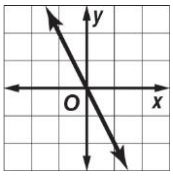
18. Adult tickets for the school musical sold for $3.50 and student tickets sold for $2.50. A total of $937.50 was collected. If no adult tickets were sold, how many student tickets were sold?

19. Which is the graph of $y = \frac{1}{2}x$?

F. 

G. 

H. 

J. 

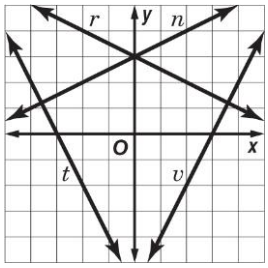
20. Which line shown at the right is the graph of $x - 2y = -6$?

A *r*

B *n*

C *t*

D *v*



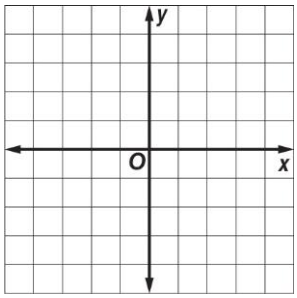
Zeros of Linear Functions

21. Find the root of the equation.

$0 = 3x + 21$

22. Solve the equation by graphing. What is the zero?

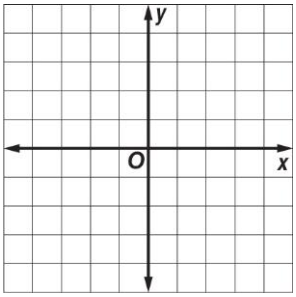
$-4x - 12 = y$



Rate of Change

23. What is the slope of the line through (–4, –5) and (5, –5)?

Graph or use slope formula. $\boldsymbol{m = \frac{y_2 - y_1}{x_2 - x_2}}$

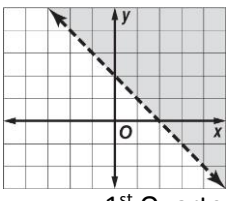


24. If (a, 3) is a solution to the equation $6a = -4b - 52$ what is a?

Graphing Inequalities

25. Which inequality has the solution set shown in the graph?

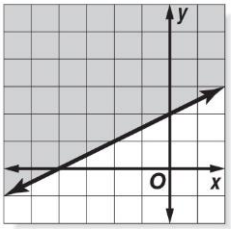
A $y < -x + 2$
B $y > -x + 2$
C $y < -x + 1$
D $y > -x + 1$



Name_____ Date _____ Pd_____

26. x + y > 1

A.



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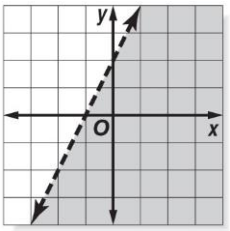

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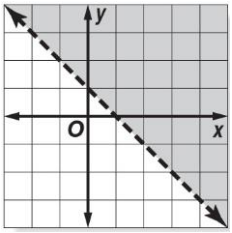

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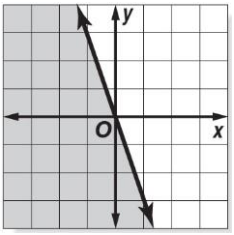


27. Which table of values is represented by the following equation?
$-3y = 3x - 12$

F.

X	Y
-2	6
-1	3
0	4
2	-2

H.

X	Y
-2	2
-1	3
0	4
2	2

G.

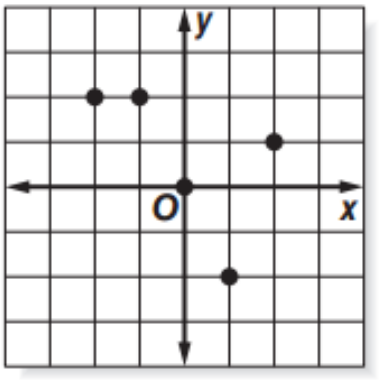
X	Y
-2	6
-1	5
0	4
1	3

I.

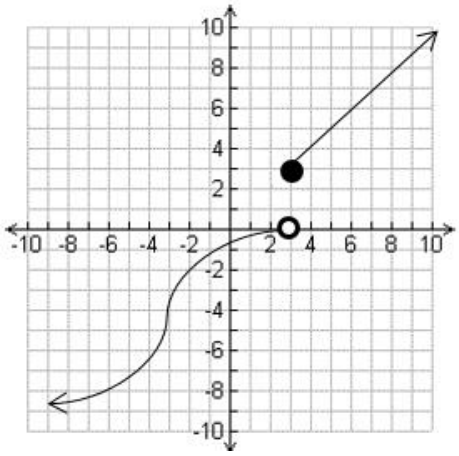
X	Y
-2	-6
-1	5
0	-4
1	3

Name_____ Date _____ Pd_____

28. What is the domain and range of the relation?



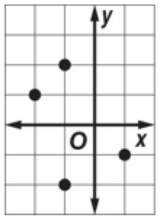
29. Determine whether the relation is a function.



A. A Function **B.** Not a Function

30. Determine which relation is a function.

F



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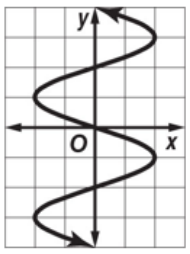

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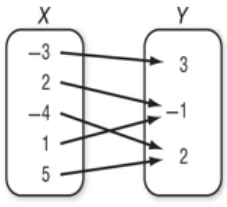


J

x	y
–2	7
0	0
1	–2
1	3

Name_____ Date _____ Pd_____

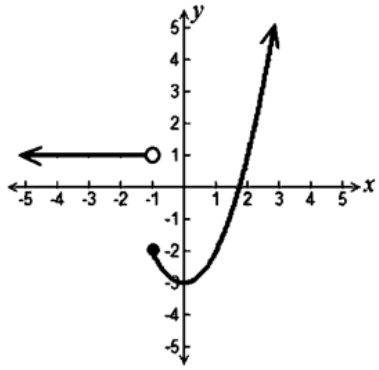
31. A plumber charges $35 to make a house call, plus $25 an hour for labor. This equation represents *c*, the total cost of a visit for *h* hours. What is the dependent variable?

A. number of hours worked
B. amount of money paid
C. price of labor
D. house call charge

32. The following data represents the cost of jelly beans per ounce. What is the domain and range shown in the table?

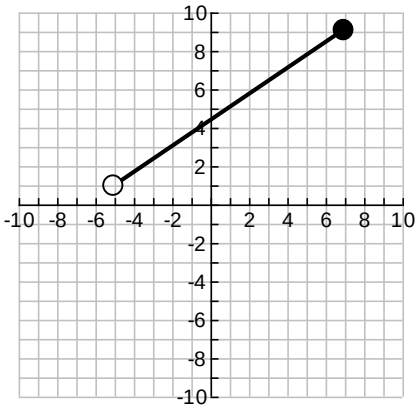
Weight (oz)	Rate ($)
5.0	4.20
6.0	5.05
7.0	5.90
8.0	6.75

33. Determine whether the relation is a function



A. Function **B.** Not a Function

34. What is the domain and range of the function?



35. If $f(x) = 5x - 2$, find the value of $f(5)$.

36. If $h(r) = \frac{2}{5}r - 2$, what is the value of $h(-10)$?

37. Interpret the *y*-intercept of the graph.

A Anna owes $10 before any payments.
B Each payment Anna makes is $50.
C Anna owes $500 before any payments.
D Anna pays off the loan in 10 payments.