Final Exam Review - Part 2

Name _Talley_

Date _____ / Hour ____

This is part of your exam grade.

Chapter 5 – Function Unit

26. Find the domain and range of the relation.

Age (in years)	Height (in inches)
2	30
4	45
8	50
12	58
16	64

D: $\{2, 4, 8, 12, 16\}$

R: $\{30, 40, 50, 58, 64\}$

27. Does this relation represent a function? Explain your answer.
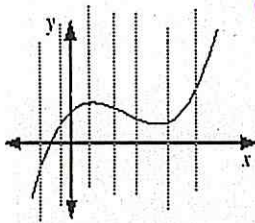
$$\{(-3, -6), (-1, -6), (5, -6), (8, -6)\}$$

Yes. no domain values are repeated.

28. Find the range for $f(x) = -3x + 5$ for the given domain. $\{-2, 0, 4\}$
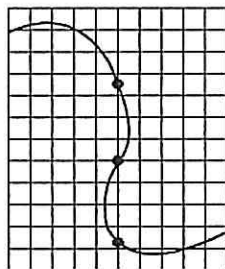
$\{-7, 5, 11\}$

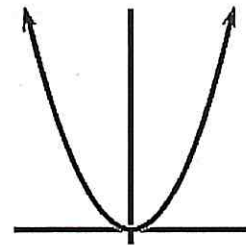29. Use the vertical-line test to determine if each graph represents a function. Explain your answers.

a)

yes

b)

no

c)
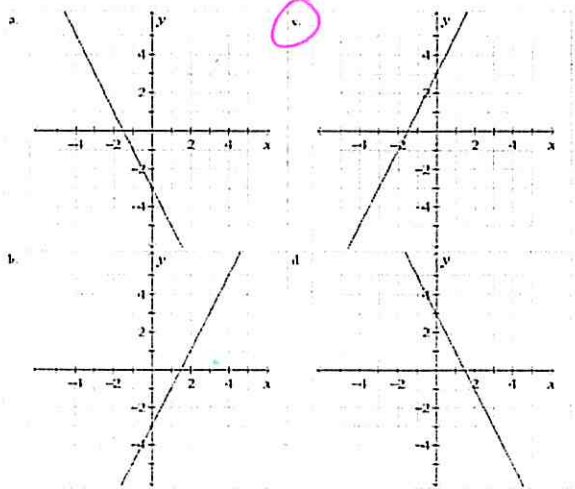
yes

30. Evaluate $f(x) = -2x - 5$ for $x = 3$.
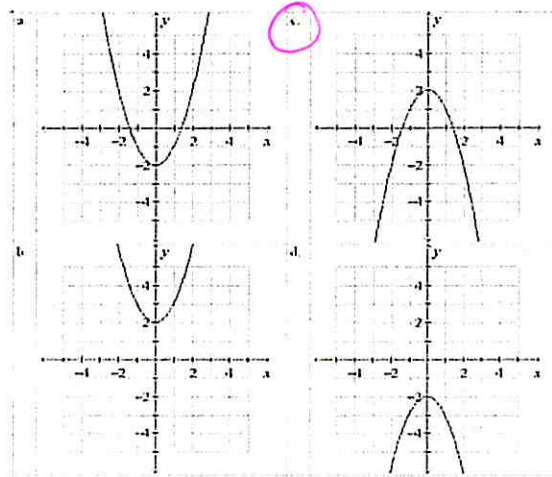
-11

31. Evaluate $f(x) = \frac{1}{3}x$ for $x = 4$.
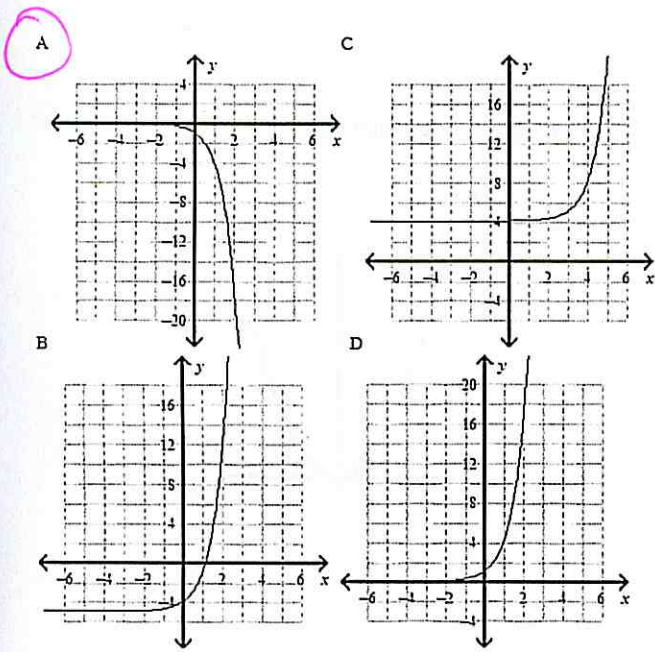
$4/3$

32. Evaluate $f(x) = -x^2 + 1$ for $x = -3$. -8
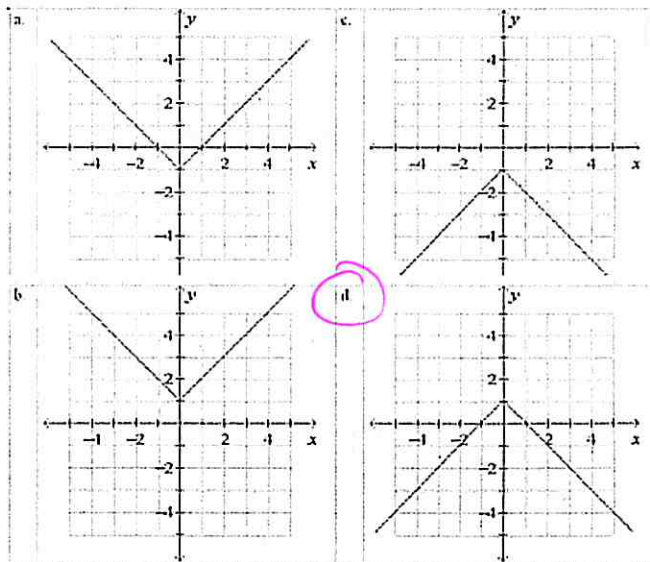
33. Graph the function $y = 2x + 3$.

a.

b.

34. Graph the function $y = -x^2 + 2$.

35. Graph the function $y = -4^x$.

A

B

C

D

36. Graph the function $y = -|x| + 1$.

Write a function rule for the table.

37.

Hour Worked	Pay
2	$15.00
4	$30.00
6	$45.00
8	$60.00

$y = 7.5x$

38. Given a function p(s), where **p** is the **perimeter** of a square and s is the side measurement, choose the set that contains reasonable domain values. Explain your answer.

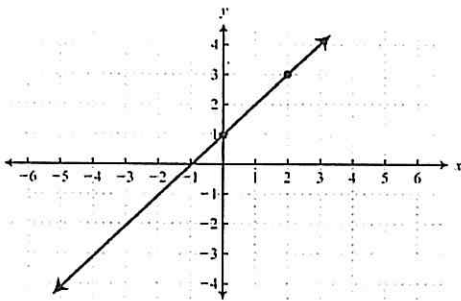   a) {-2, 0, ½, 5)   b) {3.1, 5, 7, 12}   c) {-7, -1/2, 5, 8}

39. Write a function rule that gives the total cost c(s) of s number of shirts if shirt costs $11.99.

$C(s) = 11.99s$

40. The graph of the equation $y = x + 1$ is shown below. Which ordered pair is **NOT** a solution?
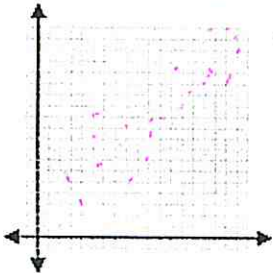

   a) (-3, -2)   b) (2, 3)   c) (2, -3)
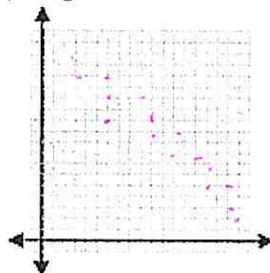
Correlation Unit

41. Draw a sketch of a scatter plot with the correlation described.
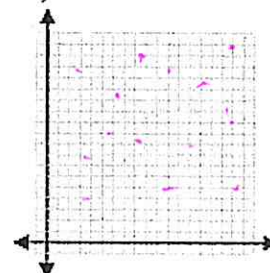
a) positive correlation

b) negative correlation

c) no correlation

For #42 and 43, choose from **strong positive, weak positive, strong negative, and weak negative.**

42. What type of relationship does a correlatin coefficient of -0.95 show?   strong negative

   What type of relationship does a correlatin coefficient of 0.32 show?   43 weak positive

Name _____

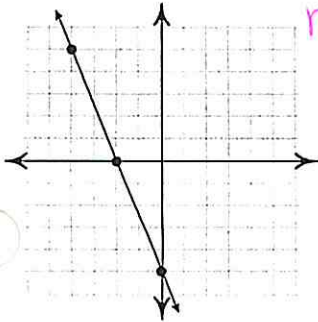Date _____ Hour _____

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44. The rate of change is constant in the table. Find the rate of change. Explain what the rate of change means for the situation.

Time (days)	Cost ($)
3	75
4	100
5	125
6	150

$ 25 per day

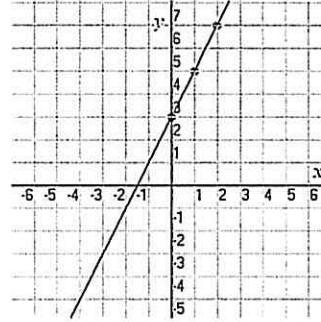Find the slope of the line on each graph.

45.

m = -5/2

46.

m = 2

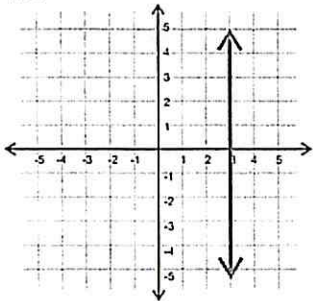Find the slope of the line that passes through each pair of points.

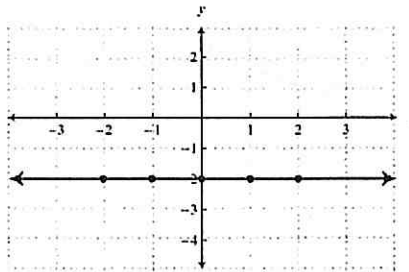47. (1, 7), (10, 1)   m = -2/3

48. (−5, 6), (−2, 3)   m = −1

Write an equation for the line and state whether the slope is 0 or undefined.

49.

x = 3
undefined

50.

y = 3
m = 0

Find the slope and *y*-intercept of each line.

51. $y = -3x + 7$ $m = -3$
    $b = 7$

52. $y = -16 + 6x$ $m = 6$
    $b = -16$

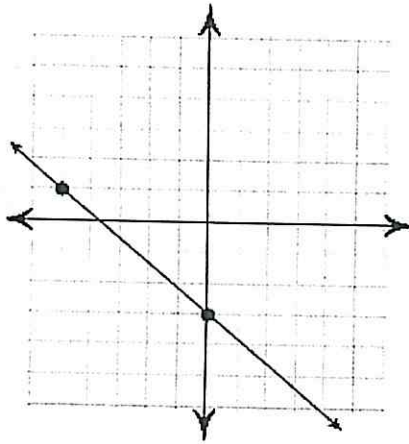53. Write an equation for a line with slope –¾ and y-intercept 5.

$$y = -3/4x + 5$$

54. Write an equation for a line with slope 4 and y-intercept -7.

$$y = 4x - 7$$

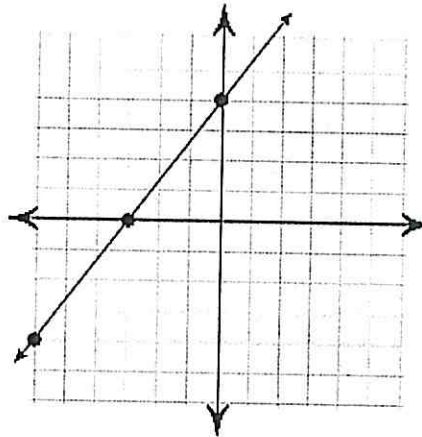Write the slope-intercept form of the equation for each line.

55.

56.

$m = -4/5$

$b = 3$

$y = -4/5x - 3$
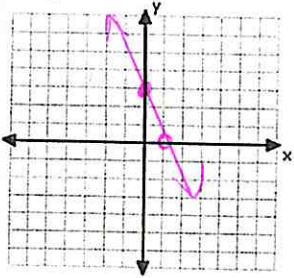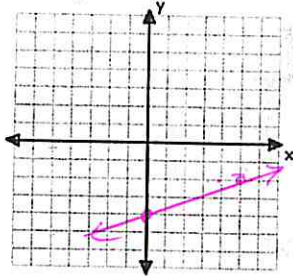

$y = 4/3x + 4$

Use the slope and *y*-intercept to graph each equation.

57. $y = -3x + 3$ 58. $y = 2/5\ x - 4$ 59. $y = -x - 4$ 60. $y = 1/2x + 5$

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Part 1 - Chapter 1

1. Write an algebraic expression for the phrase **4 times the sum of q and p.** $4(q+p)$

Simplify each expression.

2. $3\left[(15-3)^2 \div 4\right]$

108

3. $4(20 + 12) \div (4 - 3)$

128

4. $13\left[6^2 \div \left(5^2 - 4^2\right) + 9\right]$

169

5. $|18 - 6|$

12

6. $|-13|$

13

7. $\frac{1}{2}(-12m + 38)$

$-6m + 19$

8. $(-5 - c)(-1)$

$6 + c$

9. $-3(2x - 4)$

$-6x + 12$

10. $2(m + 3) + 5(m - 1)$

$7m + 1$

11. Evaluate $3a^2 + (b - c)$ for a = 2, b = 4 and c = 3.

13

12. Evaluate ac^2 for a = 2, b = 4 and c = 3.

18

13. Evaluate $-a + 2b + c$ for a = 2, b = -3 and c = 4.

-4

14. Evaluate $x(-y + z)$ for x = 3, y = 3, and z = 1.

-6

Chapter 2
Solve each equation.

15. $37 - 18 + 8w = 67$

$$w = 6$$

16. $3(y + 6) = 30$

$$y = 4$$

17. $\dfrac{5p}{7} - 18 = -43$

$$p = -35$$

18. $3p - 1 = 5(p - 1) - 2(7 - 2p)$

$$p = 3$$

19. $5x - 5 = 3x - 9$

$$x = -2$$

20. Which equation is an identity?

a) $9 + 5a = 2a + 9$ b) $3(x - 4) = 3x - 12$ c) $18x - 5 = 3(6x - 2)$ d) $6x = 4(x + 5)$

Chapter 3

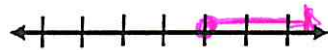21. Is -4 a solution to the inequality $b > 11.3$?

$$NO$$

22. Is 10 a solution to the inequality $3x - 15 \geq 3$?

$$yes$$

Solve the inequality. Then graph your solution.

23. $x + 7 \geq 5$

$$x \geq -2 \quad {}^{-3 \, -2 \, -1}$$

24. $-\dfrac{x}{4} > 2$

$$x < -8 \quad {}^{-9 \, -8 \, -7}$$

25. $-2w + 4 < -18$

$$w > 11 \quad {}^{10 \, 11 \, 12}$$