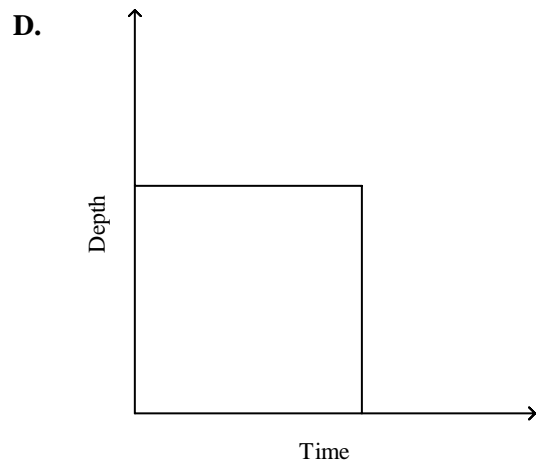
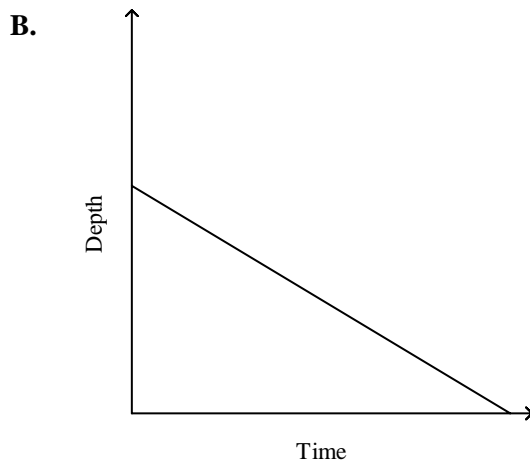
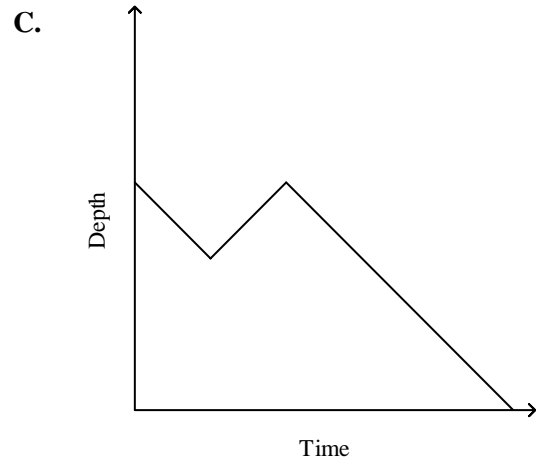
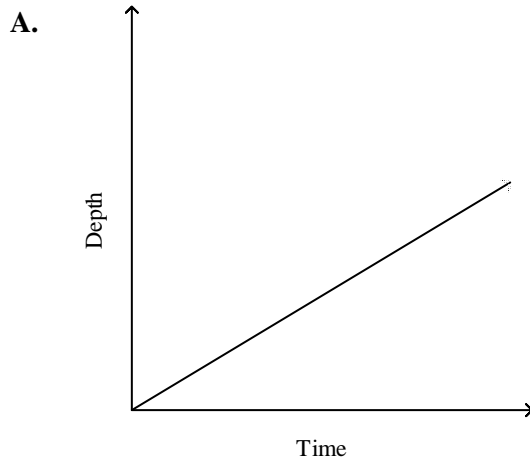


Algebra I Honors Exit Exam-1st Nine Weeks Questions 1-15 (Review Sheet)

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

1. Identify the graph that displays the depth of water in a swimming pool after the drain is opened.



2. Which relation is a function?

a.

x	y
3	8
5	10
6	6
9	-2

b.

x	y
3	8
5	10
3	6
9	-2

c.

x	y
3	8
5	10
6	6
5	-2

d.

x	y
6	8
5	10
6	6
9	-2

Short Answer

Write a verbal expression for the algebraic expression.

3. $5x^2 + 2$

Evaluate the expression.

4. $9 + 2(-2)^2(4) + 6$

5. ${}_7C_4$

6. Evaluate the following expression if $x = 6$, $y = 8$, and $z = 8$.

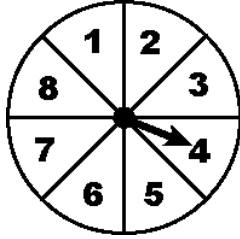
$$\frac{x^2y - 2z}{4}$$

Find the solution set for the inequality using the given replacement set.

7. $3a - 10 \geq 32$; $\{11, 12, 13, 14, 15\}$

Name the property used in the equation. Then find the value of n .

8. $11n = 11$



The spinner above is used in a game. What is the probability of the following events?

9. $P(\text{more than } 3)$

Name the set or sets of numbers to which the real number belongs.

10. $\frac{-75}{22}$

11. Write the set of numbers in order from least to greatest.

$\sqrt{10}$, 6.6, $\sqrt{6.6}$

Solve the equation. Then check your solution.

12. $17 + 10m = 4m + 5$

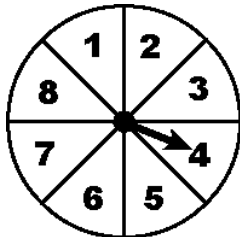
13. $4 = -4(d + 9)$

If $A = \begin{bmatrix} -2 & 4 & 9 \\ 0 & 6 & 3 \\ 1 & 2 & -4 \end{bmatrix}$, $B = \begin{bmatrix} 4 & 7 & 20 \\ -8 & 2 & 15 \\ 12 & -5 & 17 \end{bmatrix}$, $C = \begin{bmatrix} 27 & 65 & 37 \\ 18 & 74 & 14 \end{bmatrix}$, and $D = \begin{bmatrix} -18 & -48 & -52 \\ 12 & -36 & 36 \end{bmatrix}$, find each

sum, difference, or product. If the sum or difference does not exist, write not possible.

14. $D - C$

15. The Sunshine Grill offers a breakfast special in which you can choose one type of eggs, one type of cereal, and one type of drink. If there are seven types of eggs, 12 types of cereal, and four types of drinks, how many different breakfast specials can be ordered?



Find the odds of the outcome if the spinner is spun once.

16. prime or 1

Algebra I Honors Exit Exam 2nd Nine Weeks-Questions 16-30 (Review Sheet)

Solve the problem by working backward.

17. A bacteria culture doubles every 2 hours. After 12 hours, there are 320,000 bacteria. How many bacteria were there to start?

Solve the proportion. If necessary, round to the nearest hundredth.

18. Taci is studying a map before her hiking trip. On her map, 2 inches equals 85 miles. How far apart are two locations if they are 1.5 inches apart on the map?
19. Bernardo originally had 48 customers on his paper route. Through a newspaper sales promotion, his customer base increased to 63. What was the percent of increase over the original number of customers?

Solve the equation or formula for the variable specified.

20. $4xy + 4z = 9w$ for x
21. If $g(x) = x^2 + 5x + 3$, find $g(5)$.

Find the next three terms of the arithmetic sequence.

22. $-82, -83, -84, -85, \dots$

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

23. $(-5, -3), (-2, -1)$

Write a direct variation equation that relates x and y . Assume that y varies directly as x . Then solve.

24. If $y = -25$ when $x = -5$, find y when $x = 9$.

Write a linear equation in slope-intercept form to model the situation.

25. The temperature is 38° and is expected to rise at a rate of 3° per hour.
26. A television repair shop charges \$35 plus \$20 per hour.

Write an equation of the line that passes through each point with the given slope.

27. $(1, -2), m = 4$

Write each equation in standard form.

28. $y + 2 = \frac{1}{3}(x - 6)$

Write the equation in slope-intercept form.

29. $y + 4 = \frac{3}{5}(x - 5)$

Write the slope-intercept form of an equation that passes through the given point and is perpendicular to the graph of the equation.

30. $(3, 1), 5x + y = 5$

Algebra I Honors Exit Exam - 3rd Nine Weeks-Questions 31-45 (Review Sheet)

Solve the inequality.

31. $\frac{3x - 5 + 2x}{6} < -5$

Solve the open sentence and graph the solution.

32. $9 = |2x + 3|$

33. $|z - 1| < 2$

The weight limit on an elevator is 2500 pounds. Assume that the average weight of a man is 190 pounds and the average weight of a woman is 125 pounds.

34. Write an inequality to show how many men and women can get on the elevator at the same time.

Graph the system of equations. Then determine whether the system has no solution, one solution, or infinitely many solutions. If the system has one solution, name it.

35. $y = -2x + 4$

$y = 3x - 1$

36. Jordan is 3 years less than twice the age of his cousin. If their ages total 48, how old is Jordan?

Determine the best method to solve the system of equations. Then solve the system.

37. $7x - 2y = 8$

$5x + 2y = 4$

Solve the system of inequalities by graphing.

38. $y \leq 2x + 3$

$y > -x - 2$

A business is adding a new parking lot. The length must be at least twice the width, and the perimeter must be under 800 feet.

39. Make a graph showing the possible values of the length and width of the parking lot.

Simplify. Assume that no denominator is equal to zero.

40. $(-8ki^3j^2)(6k^2ij^4)$

41. $\frac{48m^{-5}n^6}{2mn^{-3}p^{-2}}$

Evaluate. Express the result in scientific notation.

42. $\frac{4.95 \times 10^5}{4.5 \times 10^{-7}}$

Find the range of each set of data.

43.

Stem	Leaf				
9	3	4	6	8	
10	6	7	8		
11	1	4	5	6	9
12	3	6	7	9	
13	0	9			9 3 = 93

44. Find the interquartile range.
12, 13, 17, 20, 31, 32, 33, 42, 43, 46, 70, 77, 77

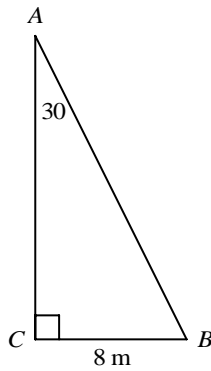
Draw a parallel box-and-whisker plot for each set of data. The top box-and-whisker plot should display the data from Set A and the bottom box-and-whisker plot should display the data from Set B.

45. A: 14, 16, 40, 52, 54, 57, 65, 68, 68, 69, 73, 73, 81
B: 16, 26, 33, 42, 43, 52, 53, 54, 54, 56, 57, 60, 62

Algebra I Honors Exit Exam - 4th Nine Weeks-Questions 46-58 (Review Sheet)

Solve the right triangle. State the side lengths to the nearest tenth and the angle measures to the nearest degree.

46.



Simplify the expression.

47. $\sqrt{75y^6z^5}$

48. $10\sqrt{6k} - \sqrt{2x} + 6\sqrt{6k} + 7\sqrt{2x}$

Find the sum or difference.

49. $(12p - 5q^2 - q) - (q^2 - 4p + 9p^2)$

Find the product.

50. $(4c + 5)^2$

Factor the trinomial.

51. $g^2 - 22g - 23$

Factor the trinomial, if possible. If the trinomial cannot be factored using integers, write prime.

52. $5t^2 + 17t + 6$

Solve the equation by factoring.

53. $(w - 13)^2 = 16$

Solve the equation.

54. $12x^2 - 19x + 5 = 0$

For questions #55 - 56, use the following scenario.

The length and width of the rectangular bottom of Sabrina's new fish tank is twice the length and width of the rectangular bottom of her old tank. The area of the bottom of the new tank is 16 ft. The length of the old tank is 3 feet more than the width of the old tank.

55. Using w to represent the width of the old tank, write an equation to show the area of the new tank bottom.
56. What is the length of the base of the new fish tank?

Solve the quadratic equation by completing the square.

57. $g^2 - 16g + 27 = 0$

Solve the equation by using the Quadratic Formula. Round to the nearest tenth if necessary.

58. $h^2 + 9h - 7 = 0$

**Algebra I Honors Exit Exam-1st Nine Weeks Questions 1-15 (Review Sheet)
Answer Section**

MULTIPLE CHOICE

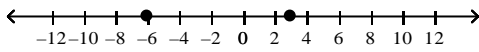
1. B
2. A

SHORT ANSWER

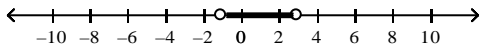
3. five times x squared plus 2
4. 47
5. 35
6. 68
7. {14, 15}
8. Multiplicative Identity; 1
9. $\frac{5}{8}$
10. rational
11. $\sqrt{6.6}$, $\sqrt{10}$, 6.6
12. -2
13. -10
14. $\begin{bmatrix} -45 & -113 & -89 \\ -6 & -110 & 22 \end{bmatrix}$
15. 336
16. 5:3
17. 5000
18. 63.75 miles
19. about 31%
20. $x = \frac{9w - 4z}{4y}$
21. 53
22. -86, -87, -88
23. $\frac{2}{3}$
24. $y = 5x$; 45
25. $T = 38 + 3k$
26. $C = 35 + 20k$
27. $y = 4x - 6$
28. $x - 3y = 12$
29. $y = \frac{3}{5}x - 7$
30. $y = \frac{1}{5}x + \frac{2}{5}$

31. $x < -5$

32. $x = 3$ and $x = -6$

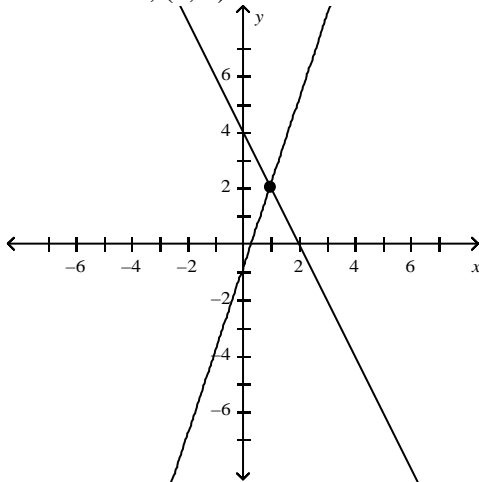


33. $-1 < z < 3$



34. $125w + 190m \leq 2500$

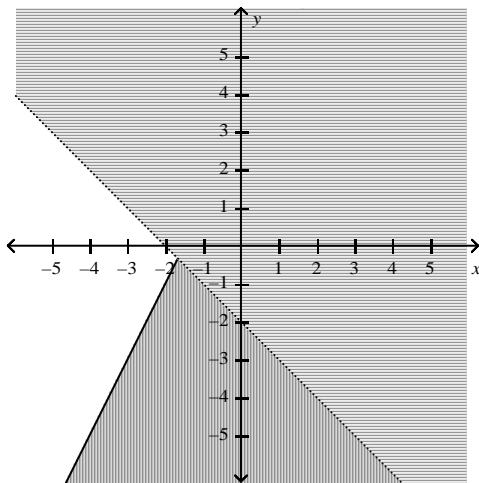
35. one solution; $(1, 2)$



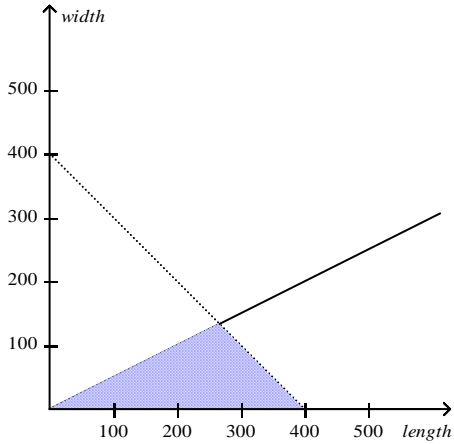
36. 31

37. elimination using addition; $\left(1, -\frac{1}{2}\right)$

38.



39.



40. $-48k^3i^4j^6$

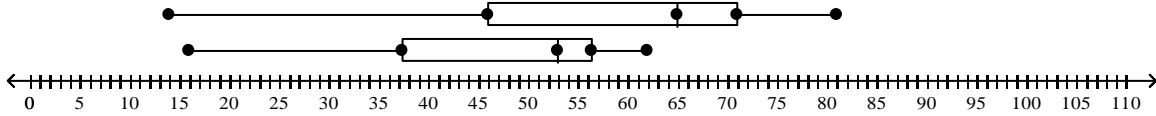
41. $\frac{24n^9p^2}{m^6}$

42. 1.1×10^{12}

43. 46

44. 39.5

45.



46. $\angle B = 60^\circ$

$AB \approx 16$ m

$AC \approx 13.9$ m

47. $5y^3z^2\sqrt{3z}$

48. $16\sqrt{6k} + 6\sqrt{2x}$

49. $-9p^2 - 6q^2 + 16p - q$

50. $16c^2 + 40c + 25$

51. $(x+1)(x-23)$

52. $(5t+2)(t+3)$

53. $\{9, 17\}$

54. $\left\{ \frac{3}{4}, \frac{1}{3} \right\}$

55. $2w + 3 = 16$

56. 2 ft

57. 14.1, 1.9

58. 0.7, -9.7