

From the Teacher: K. Evans

Class: Algebra 1

Periods: 2 and 4

Assignment: Week 5

Distance Learning 2020 Week 5

End of Year Review

Assignment is accessible in Microsoft Teams on Office 365.

My office hours are 1 pm – 3 pm, M–F. You can reach me through Remind (class code: @evans-alg1), email (kevans@tusd.net) or chat on Teams. Please continue to check your email regularly.

Week 5: Day 1-5: End of Course Review

Work on EOC Review worksheet

Simplify.

1. $35 - [6 + (4^2 \div 2)]$

2. $8(4x - 2) + g$

3. List the terms of $6x^3y^2 + 7xy^4z - 4x^2y + 5$. Give the degree of each term. What is the degree of the entire polynomial?

4. What is the value of $f(x) = \frac{2}{3}x - 3$ when $x = 42$?

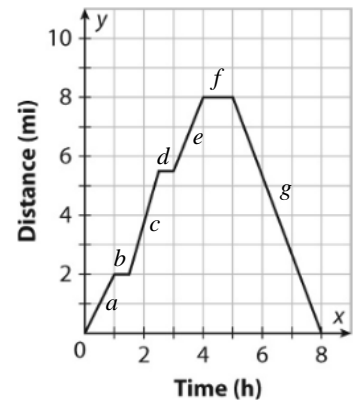
5. Describe a situation that would have a discrete graph.

6. How do you tell if a graph represents a function?

7. On Monday, the furniture truck made three deliveries within 8 miles of the warehouse. The graph shows the distance the truck is from the warehouse throughout the day.

a. What does segment d represent in this situation?

b. What is happening in segment g ?



Solve. For the inequalities, graph the solutions on a number line.

8. $8(8 + 4n) - 3n = -7(7n + 2)$

9. $2x - 44 = 5 + 7(10x - 7)$

10. $7 - 3x > 16$

11. $4(8x - 1) \leq 3(9x + 2)$

12. $19 \leq 10x - 1 < 39$

13. $1 - 9x < -53$ or $3x + 10 \leq 13$

14. $|2x + 7| \geq 3$

15. $|-3b + 5| = 14$

16. Solve $A = \frac{1}{2}(b_1 + b_2)h$ for b_2 .

17. The function $h(t)$, graphed at the right, gives the height in feet of a ball t seconds after it is thrown upward from the roof of a 50-foot tall building. How many seconds after the ball is thrown does it reach its maximum height? What is the ball's maximum height?

18. Maria earns \$6 per hour babysitting for B hours and \$5 per lawn to mow L lawns. Write an expression that best represents the amount Maria earns in one day working both jobs.

19. Zach earns \$10 for every lawn he mows and \$15 for lawn he rakes. He deposits \$500 in the bank at the end of the summer. Write the equation that represents this situation.

20. Find the x and y intercepts of $2x - 8y = 24$

Graph the following.

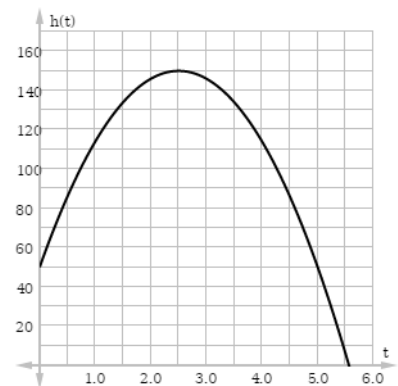
21. $3x + 5y = 15$

22. $y = -\frac{5}{2}x + 6$

23. $3x \leq -18$

24. $6x + 15y > -9$

25. $y = |x - 2| + 3$



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

26. $(-7,1)$ and $(1,5)$

Write an equation in slope-intercept form of the line with the given characteristics.

27. Passes through $(2,1)$ and $(3,5)$

28. Write an equation in point-slope form that has $m = -\frac{2}{3}$ and passes through $(9,3)$

29. Write an equation in standard form that has slope $= 5$ and passes through $(5,1)$.

30. If $f(x) = |x|$ and $g(x)$ is $f(x)$ translated down 3 units, what would the equation be?

31. Identify the vertex of the function you graphed in #25.

32. Is the ordered pair $(5,2)$ a solution to the system of equations : $2x - 3y = 4$ and $2x + 8y = 11$?

Solve the system.

33. $y = x - 7$
 $4x - 7y = 10$

34. $x - 4y = -3$
 $-3x + 5y = 2$

35. Zahra spent \$20.50 on 10 party favors for her party. The boys each received a puzzle book that cost \$1.75 each. The girls each received a magic trick that cost \$2.25 each. How many boys and how many girls attended the party?

Simplify.

36. $\left(\frac{2}{3}\right)^{-\frac{5}{2}}$

37. $9^{\frac{3}{2}}$

38. $\sqrt{(9w^2)^3} \sqrt[4]{(9w^3)^4}$

Simplify.

39. $(y^5 + 5y^3 - 3y^2) + (9y^5 - 8y^2 + 14)$

40. $(4x^2 - 2x + 6) - (5x^2 + 9)$

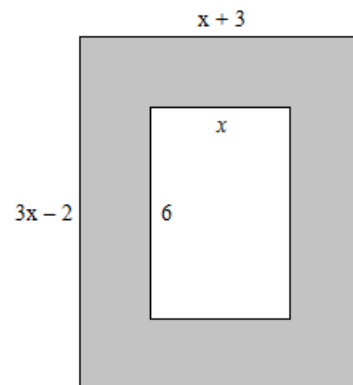
41. $(x - 3)(x^2 - 2x + 3)$

42. $(3x - 2)^2$

43. Write a polynomial that represents the area of a rectangle with sides of length $2x^2 + 1$ and $x^2 - 3$.

44. Find the area of the rectangle in #43 if $x = 3$ in.

45. Write a polynomial to represent the area of the shaded region, then solve for x given that the area of the shaded region is 24 square units.



Factor completely.

46. $d^2 - 2d - 24$

47. $4j^2 - 49k^2$

48. $5y^2 - 3y - 2$

49. $9x^2 - 24x + 16$

50. $3a^2 - 9a - 84$

Solve by factoring.

51. $x^2 - 4x = 21$

52. $2x^2 - 11x + 15 = 0$

Solve using square roots.

53. $4x^2 - 9 = 0$

54. $3(x - 2)^2 = 48$

55. What is the quadratic formula?

Solve using the quadratic formula.

56. $7n^2 + 8n = 4$

57. $6x^2 - 7x = 10$

58. Compare the graphs of $f(x) = x^2$ and $g(x) = -(x - 4)^2 + 3$

59. Find the axis of symmetry of the graph of $y = 3x^2 + 8x - 2$.

60. What are the x -intercepts of the graph of $y = (3x + 5)(x - 2)$?

61. State the domain and range of the quadratic function $y = (x + 4)^2 - 1$.

Use the following information for #71-74. The amount of time (in minutes) to cook certain vegetables one of two ways is shown below.

Steamed: 30, 10, 8, 5, 10, 40, 8, 5, 6, 6

Boiled: 25, 10, 5, 10, 20, 30, 5, 4, 5, 10

62. What is the median number of minutes for each method?

63. What is the IQR for each method?

64. What is the mean number of minutes for each method?

65. How would you compare the two methods?

Use the following information for #75-79. Data from a random group of students regarding whether they eat or skip breakfast is shown below in a two-way frequency table.

	Eat breakfast	Skip breakfast	Total
Ages 10-13	40	14	
Ages 14-17		24	36
Total	52		90

66. What are the missing values?

67. How many students eat breakfast?

68. What percentage of students are ages 14-17?

69. If you were to construct a two-way row conditional relative frequency table (to the nearest hundredth), what would the entries be in the "Ages 10-13" row?

70. Give an explanation that best supports an "association" between age and breakfast preference?