

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Algebra 1A: Summer Packet

**Simplify.**

1.  $2(5 + 9) - 6 =$

2.  $(10^2 - 4(8)) \div (8 + 9) =$

3.  $6 [13 - 2(4 + 1)] =$

4.  $9 + [4 - (10 - 9)]^3 =$

5.  **$m = -3$ ,  $p = 7$ ,  $n = -4$ , and  $q = -2$**   
 $mp - q =$

6.  $(np^2 + pq^2) =$

7.  $m(p^2 - q) =$

8.  $mn + (p - q) =$

9.  $9\frac{1}{5} - 8\frac{2}{5} + \frac{12}{15} =$

10.  $9.87 + 3.4 - 2.3 - (-1.7) =$

11.  $8\frac{2}{8} - (-3\frac{1}{6}) + 5\frac{1}{9} =$

12.  $-6.5 - (-3.45) + 9.2 =$

$$13. \frac{7}{8} \left( 3\frac{4}{5} \right) + \frac{1}{8} =$$

$$14. 3\frac{1}{4} \div 1\frac{1}{2} + 3\frac{3}{5} =$$

$$15. 9.87 \div 3. - 15.7 =$$

$$16. -3.4 + 9.3 (-3.2) =$$

$$17. 3\frac{1}{3} \left( 2\frac{4}{5} \right) - 4 + 5\frac{2}{9} =$$

$$18. -19 + 34 (-12) \div -2 =$$

$$19. 2\frac{1}{4} \div -\frac{12}{18} + 5\frac{1}{3} =$$

$$20. -83 - (-32) (-2) + -12 =$$

**Combine the like terms.**

$$21. -3x - 4 - 2x + 9 =$$

$$22. -9(x + 3) - 4x =$$

$$23. -6y - 8y - (-14) + 5y =$$

$$24. -4(3x - 2y) - 12 + 5y =$$

$$25. 9x - 2x - 4(x + 9) =$$

$$26. 9 + -3x - 8(x - 3x) =$$

**Solve each one step equation, check your work. Round to nearest TENTH if needed.**

$$27. -9 - x = -25$$

$$28. 3x = -35.8$$

$$29. -8.7 - y = -23.9$$

$$30. x + 23.6 = -93.45$$

31.  $-9x = -81$

32.  $\frac{x}{-9} = -32$

33.  $\frac{x}{12} = -72$

34.  $-21.8x = -342$

35.  $\frac{5}{9}x = -25$

36.  $\frac{x}{\frac{2}{5}} = -\frac{8}{14}$

**Solve each one step inequality and GRAPH. Round to nearest TENTH if needed.**

37.  $8x \leq -24$

38.  $x - 1.3 > -33.5$

39.  $-7x \geq -49$

40.  $x + -12 < -322$

41.  $-4x \leq -3.4$

42.  $\frac{x}{-9} \geq -8.3$

43.  $-9.8 - x \leq -2.34$

44.  $x + 3.45 > -12.8$

**Solve each proportion.**

45.  $\frac{8}{12} = \frac{-3}{x}$

46.  $\frac{8}{x} = \frac{-12}{30}$

47.  $\frac{x+5}{10} = \frac{8}{9}$

48.  $\frac{z-6}{5} = \frac{7}{12}$

**Solve each word problem.**

49. Paul, Steve, Robin, and Ryan all play different instruments. Their instruments are guitar, bass guitar, piano, and drums. Robin's instrument is not a string instrument. Paul does not play bass guitar or piano. Ryan's instrument has only four strings. Which instrument does each play?

50. Find three consecutive integers EVEN integers whose sum is 180.

51. This week Lera withdrew \$150 from her checking account. She wrote a check for \$275, made a deposit of \$200, and then wrote another check for \$75. She now has \$185 in her account. How much did Lera have in her account at the beginning of the week?

52. Troy is writing a book of short stories. It is his goal to write one short story this month, two short stories next month, three short stories the following month and so on for 13 months. How many stories will he have written at the end of sixteen months?

53. Find the volume and surface area:

- a. rectangular prism: length= 12 ft    width = 8 ft    height= 5.3 ft
- b. triangular prism: base of triangle= 3.4 in    height of triangle: 4.6 in    height of shape: 15.4 in.
- c. cylinder: diameter = 17 meters    height = 19 m

54. Tim organized a film festival showing five movies. The running times, in minutes, were 97, 123, 115, 147, and 108. What is the mean, median, range, and mode of the data?

**Find the slope of the two points.**

55. (-3, 5) and (-8, -11)

56. (-4, 5) and (-12, 7)

57. (-3, -5) and (-8, 13)

58. (-11, 17) and (-12, -8)

**Graph each point on the coordinate plane.**

59.  $(-3, 0)$  (A)      60.  $(-4, -3)$  (B)      61.  $(-3, 9)$  (C)      62.  $(0, 6)$  (D)

63.  $(-4, 8)$  (E)      64.  $(5, 7)$  (F)      65.  $(8, -2)$  (G)      66.  $(0, -8)$  (H)

