

Name:

Algebra 1 and Algebra 1H Summer Packet

This packet is meant as a review of the Pre-Algebra topics that you will need to start the year running.

Algebra 1 students – *You are expected to complete these problems by the first day of school. We will go over the packet during the first couple of days of school and use it to pinpoint the sections of Chapters 1-3 that we need to cover.*

Algebra 1H students – *You too are expected to complete these problems by the first day of school. We will not review the majority of these topics in class – you are expected to know this material.*

We will use these skills for some application problems from Chapters 1-3, but then we will start with new material. A calculator is NOT allowed on these questions.

For #'s 1-15, evaluate the given expression:

1. $7 + 3^2 \cdot 2$

5. $50 - [7 + (3^2 \div 2)]$

2. $(5^2 + 17) \div 7$

6. $\frac{1}{6}(6+18) - 2^2$

3. $(24 - 11) - (3 + 2) \div 4$

7. $4^3 \div 8 + 8$

4. $\frac{20 - 12}{5^2 - 1}$

8. $12(6 - 3.5)^2 - 1.5$

9. x^2 when $x = \frac{3}{4}$

13. x^4 when $x = \frac{2}{3}$

10. kn when $k = 9, n = 4.5$

14. $x \div y$ when $x = 1\frac{3}{5}, y = \frac{12}{25}$

11. $y - \frac{1}{2}$ when $y = \frac{5}{6}$

15. $\frac{b}{c}$ when $b = 24, c = 2.5$

12. $\frac{1}{2}k$ when $k = \frac{2}{3}$

For #'s 16-25, write an expression to represent the given situation:

16. Eight more than a number

17. One-half of a number

18. The product of six and a number

19. The difference of seven and a number

20. Five more than three times a number

21. The quotient of twice a number and twelve

22. Each person's share if p people share 16 slices of pizza equally

23. Number of days left in the week if d days have passed so far

24. Number of months in y years

25. Number of hours in m months

For #'s 26-55, simplify:

26. $-11+3$

32. $-3.6-22.2$

27. $13+(-7)$

33. $\frac{1}{2}-\left(-\frac{1}{4}\right)$

28. $-11+(-9)$

34. $-15-29$

29. $-7\frac{1}{2}+(-13\frac{7}{8})$

35. $3.6-|6.6-(-11)|$

30. $-18+(-12)+(-19)$

36. $-8(-11)$

31. $-11-(-3)$

37. $-\frac{1}{2}(32)$

38. $(2.5)(-1.3)$

42. $-42 \div 2 \div -3$

39. $-\frac{3}{4}\left(-\frac{1}{3}\right)\left(-\frac{8}{9}\right)$

43. $-\frac{1}{5} \div (-6)$

40. $-18 \div -6$

44. $\frac{1}{3}\left(-\frac{9}{10}\right)(-m)(-m)$

41. $-\frac{1}{2} \div \frac{5}{6}$

45. $5(m+5)$

46. $-w(2w+7)$

$$47. \frac{1}{2}x(4x-10)$$

$$51. \frac{12y-8}{4}$$

$$48. 6y - y$$

$$52. |-5|$$

$$49. 6x + 2(x+4)$$

$$53. |4| - |-11|$$

$$50. 6xy - 11xy + 2xy - 4xy + 7xy$$

$$54. \sqrt{64}$$

$$55. -\sqrt{121}$$

For #'s 56-70, solve for x :

$$56. \frac{x}{2} = 14$$

$$61. 9x + 5 = 23$$

$$57. x - 7 = -12$$

$$62. \frac{x}{3} - 4 = 2$$

$$58. -8 + x = 5$$

$$63. 3x + 9x = 60$$

$$59. 4x = -84$$

$$64. x + 3 - 4x = 8$$

$$60. -27 = \frac{3}{4}x$$

$$65. \frac{3}{2}(x+1) = 3$$

$$68. 4(x-3) = -2(6-2x)$$

$$66. 16 - 2x = 5x + 9$$

$$69. 2.9x + 5 = 4.7x - 7.6$$

$$67. 6(2x+10) = 5(x+5)$$

$$70. 3x - 4 = 2x + 8 - 5x$$