

**Complete this packet neatly in pencil.**

**Show all work and record your final answers on the answer sheet!!!**

**Integers – List the integer(s) that make the statement true. (Hint – absolute value is the number of spaces you move on the number line)**

1.  $|3| =$

2.  $|-12| =$

3.  $|0| =$

**Find the sum. –**

4.  $-2 + (-17) =$

5.  $-51 + 48 =$

**Find the difference as a sum. (Hint – Keep, Change, Change)**

6.  $4 - 10 =$

7.  $14 - (-46) =$

**Find the sum or difference**

8.  $6 + -7 + -3 =$

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

**Find the product. (Hint – Multiple. Count your negatives – even amount is positive, odd amount is negative) –**

10.  $(2)(-8)(-6) =$

11.  $(-2)(0)(-12) =$

**Find the quotient. (Hint – Same rules as multiplication)**

12.  $144 \div (-12) =$

13.  $-54 \div (-18) =$

**Find the quotient. If there is no answer, EXPLAIN WHY! (Hint – it has something to do with a zero) –**

14.  $(-3 + 3) \div (-8 + 2) =$

15.  $(-8 + 2) \div (-3 + 3) =$

**Add or Subtract.** Write the answer as a proper fraction in lowest terms or as a mixed number in simple form. (Hint – You need a common denominator to add/subtract.) –

16.  $\frac{3}{4} + \frac{3}{4} =$

17.  $-3\frac{1}{4} - (-1\frac{1}{6}) =$

18.  $-1\frac{5}{6} + 2\frac{3}{8} =$

19.  $\frac{-11}{12} + \frac{13}{13} =$

**Multiply or Divide.** Write the answer as a proper fraction in lowest terms or as a mixed number in simple form. (Hint – You can cross cancel/cross reduce when you multiply/divide. Dividing is the same as multiplying by the reciprocal.) –

20.  $\frac{-2}{5} \times \frac{-15}{16} =$

21.  $\frac{5}{8} \div 1\frac{4}{5} =$

**Order of Operations** - (Hint – PEMDAS) Simplify the expression using order of operation.

22.  $54 \div 6 + 18 \times 2 =$

23.  $9 \times 2^3 + 7 \times 5^2 =$

**Simplify the following expression using order of operations. Show work! –**

24.  $3(8 + 2)$

26.  $-4(9 + -3)$

**Simplify the following expression using distributive property. Show work! –** (Hint – you should get the same answers as above by showing different steps)

27.  $3(8 + 2)$

28.  $10(3 - 8)$

29.  $-4(9 + -3)$

30.  $-2(-4 - 7)$

**Write a variable expression for a word phrase. Do not solve. –** (Hint – Remember that you cannot use a times sign and watch the order with terms like “less than” and “subtracted from”)

31. fifteen more than the product of a number and eleven

32. a number divided by the remainder of eighty-three minus ten

**Write an equation or inequality for the word sentence. Do not solve.**

33. The sum of a number and three is greater than five.

34. Three more than the product of six and a number is equal to the sum of the number and twenty-eight.

### **Exponents**

Simplify the expression. (Hint – any non-zero number to the zero power equals one)

35.  $2^6$

36.  $(15 + 12)^0$

**Evaluate the expression when  $a = 1$ ,  $b = 2$ , and  $c = 3$ .**(Hint - Substitute the values for the variable and follow order of operation rules)

37.  $3b^2c^3$

38.  $8c + (10b + c^2)4$

**Evaluate the expression if  $m = 5$ ,  $n = 3$ ,  $p = 2$ .**

39.  $np^0$

40.  $m^3 - n^3$

41.  $p^nm^n$

42.  $(7 + n^m)^n$

**Like Terms** Add or subtract. (Hint – Only like terms can be combined. A like term must have the same variable(s) and the same exponent)

43.  $x - 8x$

44.  $4m + m - 2m$

45.  $5x + -8x + -7x + 8x + 2x + 7x + -5x$

46.  $y^2 + y^2 + y^2$

**Add or subtract.**

47.  $6x^3 + 9x + 10x^3 + 4x^2$

48.  $8a^2 + 4ab + 6a + -8a^2$

**Simplify using distributive property.**

49.  $6(3n + 2)$

50.  $(2x + 3y)5$

**Multiply.** (Hint – Everything can multiply together. Multiply the coefficients aka front numbers and add the exponents of the same variable.)

51.  $(4y)(-3y)$

52.  $(5a^2)(-5a^4)$

53.  $(-5xy)(-9xy)(-2xy)$

54.  $(7a)^2$

55.  $(-2xy)^3$

56.  $(2x^3)^4$

**Simplify the expression.**

57.  $2q - 9 - 2q + 11$

58.  $-3n + 7 + 2n - 8$

59.  $2 + (x + 3)5$

60.  $6(r + 5) + 9(r - 2) - 4r$

61.  $[4 + (-3)]b - b(-6 + 2)$

62.  $(3x^2)(4x) - (5x)(2x^2)$

**Equations** – Solve the following equations. Show your steps! (Hint – only use the inverse operation to move terms across the equal sign)

63.  $15 = 3m - 8m$

64.  $32 - 4w = 0$

65.  $55 - 3q - 2q = 10$

66.  $7p = 3p + 20$

67.  $4a - 7 = 18 - a$

68.  $6n + 2(n + 7) = 46$

69.  $14 + \frac{v}{11} = 17$

70.  $\frac{3}{5}c = 2c - 7$

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

### Final Answer Sheet

Please show your work on the other pages, then put your final answers here in the answer blanks.

- |           |           |           |
|-----------|-----------|-----------|
| 1. _____  | 28. _____ | 55. _____ |
| 2. _____  | 29. _____ | 56. _____ |
| 3. _____  | 30. _____ | 57. _____ |
| 4. _____  | 31. _____ | 58. _____ |
| 5. _____  | 32. _____ | 59. _____ |
| 6. _____  | 33. _____ | 60. _____ |
| 7. _____  | 34. _____ | 61. _____ |
| 8. _____  | 35. _____ | 62. _____ |
| 9. _____  | 36. _____ | 63. _____ |
| 10. _____ | 37. _____ | 64. _____ |
| 11. _____ | 38. _____ | 65. _____ |
| 12. _____ | 39. _____ | 66. _____ |
| 13. _____ | 40. _____ | 67. _____ |
| 14. _____ | 41. _____ | 68. _____ |
| 15. _____ | 42. _____ | 69. _____ |
| 16. _____ | 43. _____ | 70. _____ |
| 17. _____ | 44. _____ |           |
| 18. _____ | 45. _____ |           |
| 19. _____ | 46. _____ |           |
| 20. _____ | 47. _____ |           |
| 21. _____ | 48. _____ |           |
| 22. _____ | 49. _____ |           |
| 23. _____ | 50. _____ |           |
| 24. _____ | 51. _____ |           |
| 25. _____ | 52. _____ |           |
| 26. _____ | 53. _____ |           |
| 27. _____ | 54. _____ |           |