

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. $3(8 + 2)$

25. $-2(-4 - 7)$

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