

Name _____

Date _____

Chapter 2 Study Guide Blue

Vocabulary:

Whole Numbers: _____

Examples:

Integers: _____

Examples:

Rational Numbers: _____

Examples:

Compare the following integers using $>$, $<$, or $=$.

1) -3 5

2) -5 -3

3) -8 3

Order from least to greatest.

4) $-4, 5, 0, -6, -3$

5) $3.2, 4, -2.5, -3, 3$

6) $-2\frac{1}{3}, -2\frac{5}{6}, 0, -2, -3, 3$

Evaluate.

7) $|6|$

8) $|-7|$

9) $|-4| + |2 - 9|$

10) $7 + |-2 + 5|$

11) $-(-5)$

12) $-(-3x + 9)$

13) $-(23)$

14) $-(4x - 3)$

Find the sum, difference, product, or quotient of each. Think \$ or socks.

15) $-5 + 3 =$

16) $-12 + (-8) =$

17) $1 + (-7) =$

18) $-120 + 130 =$

19) $2 - 7 =$

20) $-2 - 9 =$

21) $-4 - (-6) =$

22) $-230 - 130 =$

23) $-4(8) =$

24) $-5(-6) =$

25) $-22 \cdot 12 =$

26) $-3 \cdot -9 =$

27) $-18 \div -6 =$

28) $\frac{-36}{9} =$

29) $-2 \div 9 =$

30) $\frac{-16}{-2} =$

Solve using order of operations. You do not need to distribute because you can solve the expression in the parentheses.

31) $5(-6 + 3)$

32) $-3(-2 + 5) - 9 =$

33) $\frac{5-9}{3^2-7} + 6 =$

Combine Like Terms:

34) $3x + 9 - 2x - 4 + x$

35) $5x^2 - 3x + 6 - 3x^2 + 4x - 7$

36) $3x + 7xy - 8x + 3y$

37) $3ab + 4a - 7ab - 9b + 2b$

38) $3x^3 - 9x^2 + 5x^2 - 7x^3$

39) $3w + 5 - 7w - 9 + 2w$

Distribute:

40) $4(5x + 3)$

42) $6(2x - 7)$

43) $-2(4x - 6)$

44) $-3(-4x - 6)$

Distribute and Combine:

45) $3(4x + 7) + 4x$

46) $4(3x - 6) + 8$

47) $-3(-5x + 3) - 5x + 3$

48) $3x + 2(4x + 5)$

49) $3x - 5(2x - 3) + x$

50) $6 - 3(-5 + x) - 5x$

Word Problems:

51) The temperature at night was $-5^{\circ}F$. 12 hours later it was $8^{\circ}F$. How much did the temperature rise in 12 hours? _____

52) A diver was at -24 feet. He climbed 15 feet. Where is he now? _____

53) The temperature was $12^{\circ}F$ on Tuesday. It dropped 18° on Wednesday. What was the temperature on Wednesday? _____

54) A diver was at -36 feet. He descended 12 feet. Where is he now? _____

55) The temperature was $18^{\circ}F$ on January 15th. It dropped 4 degrees in every hour for 6 hours. What was the temperature after the 6 hours? _____