Name _____

Integer Operations

Adding Integers
- If the signs are the same, add the numbers and keep the sign.
  - $7 + 9 = 16$ $-2 + -6 = -8$
- If the signs are different, find the difference between the numbers and keep the sign of the number with the greater absolute value.
  - $5 + -11 = -6$ $-10 + 12 = 2$

Subtracting Integers
- Change the subtraction to addition and the next number to its opposite. Then follow the rule for addition. (a.k.a. Add a line, change the sign.)
  - $6 - 4 \rightarrow 6 + -4 = 2$ $-10 - -8 \rightarrow -10 + 8 = -2$

Multiplying and Dividing Integers
- Multiply or divide.
- If there are an odd number of negatives, your answer will be negative.
- If there is an even number of negative signs, your answer will be positive.
  - $-5 \bullet -3 = 15$ $(-1)(5)(2) = -10$

  - $-56 \div -8 = 7$ $\dfrac{-16}{4} = -4$

1. $51 - -11 =$ _____

2. $(-7)(6)(-4) =$ _____

3. $33 + -48 =$ _____

4. $240 \div -6 =$ _____

5. $-24 \bullet -52 =$ _____

6. $-67 - 1 =$ _____

7. $-5 + -13 =$ _____

8. $-288 \div -24 =$ _____

9. $-18 + -23 + 10 =$ _____

10. $-27 - -27 =$ _____

11. $-6 \bullet -5 \bullet -4 =$ _____

12. $15 - -28 - 63 - 14 =$ _____

13. $\dfrac{-144}{12} =$ _____

14. -53 + 20 + -7 + -14 + 13 = _____

15. (0)(-24) = _____

16. -137 – 45 = _____

17. 0 ÷ -12 = _____

Absolute Value

Absolute Value – the distance a number is from zero on the number line.

Ask yourself: How far is the number from zero?

$$|31| = 31 \qquad |-16| = 16 \qquad |-12 + 8| = |-4| = 4$$

18. |-1234| = _____

19. |97| = _____

20. |20 + -25| = _____

21. |-7| + |13| = _____

Order of Operations

$\underline{P}$arentheses ( ), Brackets [ ], Braces { }
$\underline{E}$xponents
$\underline{M}$
$\underline{D}$ ⟩ Multiply and divide from left to right
$\underline{A}$
$\underline{S}$ ⟩ Add and subtract from left to right

22. 12 ÷ 3 + 12 ÷ 4 = _____

23. (21 ÷ 7 + 4) • 11 = _____

2

Summer Packet – 7th into 8th grade

24. $96 \div 12(4) \div 2^2 =$ _____

25. $\dfrac{86-11}{9+6} =$ _____

26. $6 + 5^2 - 2 =$ _____

27. $7[(12 + 5) - 3(4)] =$ _____

28. $144 \div 16 \bullet 9 \div 3 =$ _____

29. $-15 - 8 + -4 - -6 =$ _____

30. $(20 - 9 + 28 - 17 + 7 - 24)^2 \div (99 \div 33 + 2) =$ _____

31. $(-72 \div 9)(-15 \div -5) =$ _____

32. $-6[7 - (-225 \div 15) \bullet 3] =$ _____

33. $(5 + -18 \bullet 2)(16 - 4^2) =$ _____

34. $\dfrac{-36 \div 2^2}{67 - 70} =$ _____

35. $40 \div 8 - 3 \cdot 5 + 7 =$ _____