

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

Evaluate each expression below. Re-write each subtraction problem as an addition problem!

1.  $21 - (-12)$

2.  $-100 + (-10)$

3.  $(4)(-13)$

4.  $\frac{200}{-8}$

5.  $-19 - 22$

6.  $14 \cdot (-3)$

7.  $23 + (-44)$

8.  $-9 - (-25)$

9.  $\frac{-20}{-5}$

10.  $-19 + (-4)$

11.  $-44 + 11$

12.  $-80 / 8$

13.  $-10 + 14$

14.  $-13 - (-15)$

15.  $-4 \cdot 5$

16.  $8 - 15$

17.  $-8(-4)$

18.  $28 + (-16)$

19.  $-38 + 31$

20.  $-6(9)(2)$

21.  $-14 - (-11)$

22.  $-9 + 18$

23.  $14(-7)$

24.  $-12 + (-9)$

25.  $-46 \div (-2)$

26.  $8 + (-22)$

27.  $-45 \div 9$

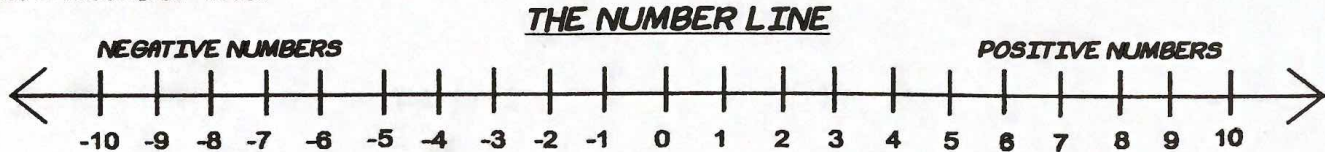
28.  $-9 + (-3)$

29.  $-9(-4)$

30.  $-12 - 19$

# INTEGER CHEAT SHEET

**Integers**- A set of positive and negative whole numbers. They can be represented on a number line.



**Absolute Value**- The distance a number is from zero on the number line. An absolute value is never negative. Examples:  $|-5| = 5$  and  $|5| = 5$

## ADDING INTEGERS

**SAME SIGN**- Add and Keep the Sign!

Add the absolute value of the numbers and keep the same sign.

(positive) + (positive) = Positive

$$(+4) + (+5) = +9$$

(negative) + (negative) = Negative

$$(-4) + (-5) = -9$$

**DIFFERENT SIGNS**- Subtract and Keep the Sign of the Bigger Number!

Subtract the absolute value of the numbers and keep the sign of the bigger number.

$$(-4) + (+5) = +1$$

$$(+4) + (-5) = -1$$

## SUBTRACTING INTEGERS

Do not subtract integers. You must change the signs:

**"Add the Opposite"**

**KEEP**- Keep the sign of the first number

**CHANGE**- Change the subtraction sign to addition

**CHANGE**- Change the sign of the second number to the opposite sign. If it is positive- change to negative. If it is negative- change to positive.

$$(+4) - (-4)$$

Keep    change    change  
(+4)    +    (+4)

**NOW USE THE RULES FOR ADDING:**

**SAME SIGN**- Add absolute values and keep sign:

$$(+4) + (+4) = 8$$

## MULTPLYING INTEGERS

**SAME SIGNS- POSITIVE**

Multiply the numbers. Answer will be positive.

$$(-5) \times (-5) = +25$$

**DIFFERENT SIGNS- NEGATIVE**

Multiply the numbers. Answer will be negative

$$(+5) \times (-5) = -25$$

## DIVIDING INTEGERS

**SAME SIGNS- POSITIVE**

Divide the numbers. Answer will be positive.

$$(-5) \div (-5) = +1$$

**DIFFERENT SIGNS- NEGATIVE**

Divide the numbers. Answer will be negative

$$(+5) \div (-5) = -1$$

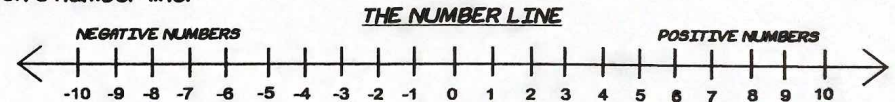
Name: Solutions Date: Nov. 6 Class: Math 8

Evaluate each expression below. Re-write each subtraction problem as an addition problem!

- |   |   |   |   |
|---|---|---|---|
| 1. $21 - (-12)$<br>$21 + (+12)$<br>$+ 33$   | 2. $-100 + (-10)$<br>$+ 10$                 | 3. $(4)(-13)$<br>$- 52$                   | 4. $\frac{200}{-8}$<br>$- 25$             |
| 5. $-19 - 22$<br>$-19 + (-22)$<br>$(-41)$   | 6. $14 \cdot (-3)$<br>$- 42$                | 7. $23 + (-44)$<br>$- 21$                 | 8. $-9 - (-25)$<br>$-9 + (+25)$<br>$+ 16$ |
| 9. $\frac{-20}{-5}$<br>$+ 4$                | 10. $-19 + (-4)$<br>$- 23$                  | 11. $-44 + 11$<br>$- 4$                   | 12. $-80 / 8$<br>$- 10$                   |
| 13. $-10 + 14$<br>$+ 4$                     | 14. $-13 - (-15)$<br>$-13 + (+15)$<br>$+ 2$ | 15. $-4 \cdot 5$<br>$- 20$                | 16. $8 - 15$<br>$8 + (-15)$<br>$- 7$      |
| 17. $-8(-4)$<br>$+ 32$                      | 18. $28 + (-16)$<br>$+ 12$                  | 19. $-38 + 31$<br>$- 7$                   | 20. $-6(9)(2)$<br>$- 108$                 |
| 21. $-14 - (-11)$<br>$-14 + (+11)$<br>$- 3$ | 22. $-9 + 18$<br>$+ 9$                      | 23. $14(-7)$<br>$- 98$                    | 24. $-12 + (-9)$<br>$- 21$                |
| 25. $-46 + (-2)$<br>$+ 23$                  | 26. $8 + (-22)$<br>$- 14$                   | 27. $-45 + 9$<br>$- 5$                    |   |
| 28. $-9 + (-3)$<br>$- 12$                   | 29. $-9(-4)$<br>$+ 36$                      | 30. $-12 - 19$<br>$-12 + (-19)$<br>$- 31$ |   |

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**DIFFERENT SIGNS- NEGATIVE**  
Divide the numbers. Answer will be negative

$$(+5) \div (-5) = -1$$