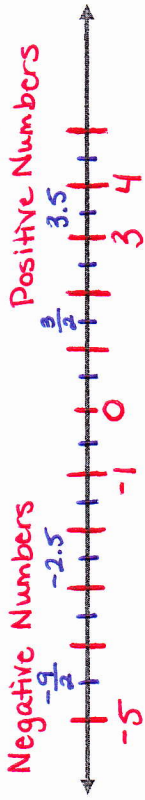


1.2 - Integers, Absolute Value and Properties



- Label "0".
- Label the side that contains the negative numbers.
- Label the side that contains the positive numbers.
- Place $3, \frac{3}{2}, 3.5, 4$ on the number line.
- Place $-1, -\frac{9}{2}, -2.5, -5$ on the number line.

Write an integer for the following, then write its opposite.

- three degrees below zero $\underline{-3}$
- \$20 lost trading $\underline{-20}$
- 50 feet above sea level $\underline{50}$
- 10 yards gained on the field $\underline{10}$
- a bank deposit of \$500 $\underline{500}$

Absolute Value of a number is the distance a number is away from zero. IT IS ALWAYS POSITIVE!

11. $|9| = \underline{9}$

12. $|-17| = \underline{17}$

13. $-|-8| = \underline{-8}$
 $-1 \cdot |-8|$

15. $|12 - 3| = \underline{9}$
 $19|$

17. $3|-4| = \underline{12}$
 $3 \cdot 4$

14. $|-4| + |3| = \underline{7}$
 $4 + 3$

16. $|8| - |-3| = \underline{5}$
 $8 - 3$

18. $2|-5| - |-6| = \underline{4}$
 $2 \cdot 5 - 6$
 $10 - 6$

Compare each pair of numbers using $<$, $>$, or $=$.

19. $5 < 8$ 20. $-3 > -9$ 21. $|-4| = 4$

22. $-7 < |-7|$ 23. $\frac{1}{2} > -5$

There are 3 properties that we will use.

Commutative Property <i>• order switches</i>	$A + B = B + A$ $A \cdot B = B \cdot A$
Associative Property <i>• parentheses move</i>	$(A + B) + C = A + (B + C)$ $(A \cdot B) \cdot C = A \cdot (B \cdot C)$
Distributive Property <i>• parentheses go away</i>	$A(B + C) = A \cdot B + A \cdot C$ $A(B - C) = A \cdot B - A \cdot C$

Name the property illustrated.

24. $7x + 8y = 8y + 7x$ Commutative

25. $r(3 + 4t) = 3r + 4rt$ Distributive

26. $(6x + 9) + 7y = 6x + (9 + 7y)$ Associative