





Number Line

Example: Order the following numbers from smallest to largest:
 8, -4.5, ³/₄, -1, -0.5, 1¹/₄, 7.75, - ³/₄, -0.1

10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7

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Understanding Signed Numbers

- Absolute Value the distance from zero (distance is always positive)
 - Examples: |23| =
 - |-6| =
- Opposite of a number the number with the same absolute value but different sign
 - Examples: What is the opposite of 10?

What is the opposite of -2?





Adding Signed Numbers Other way of looking at addition of signed numbers: Same sign - add the absolute values of the numbers, keep the sign Different signs - find the different of the absolute values of the numbers, keep the sign of the bigger digit Use what makes the most sense to you!









Multiplying/Dividing Signed Numbers

- Multiplying or dividing two numbers with the same sign results in a positive number
 - $(+)(+) = (+) \qquad (+)/(+) = (+)$
 - (-)(-) = (+) (-)/(-) = (+)
- Multiplying or dividing two numbers with different signs results in a negative number
 (+)(-) = (-) (+)/(-) = (-)
 - (-)(+) = (-) (-)/(+) = (-)
- See <u>www.mathisfun.com/multiplying-negatives.html</u>







Application Problems • Example: If today it was -4°F in Alaska and 25°F in Green Bay, what is the temperature difference? • Try Yourself: Your shop made a profit of \$1,357 in January, had a loss of \$1,531 in February, and a profit of \$441 in March. What was the profit or loss for the first quarter? Represent with a signed number.













- Example: The following formula will find the side of a triangle across from 90°. Calculate the missing side of the triangle: $\sqrt{3.25^2 + 6.5^2}$
- ▶ Example: (6-8)-3(12-4*2)

