Order of Operations

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| What is a numerical expression? | A numerical expression includes only numbers and operational symbols |
| What does it mean to simplify? | To simplify is to find an equivalent expression that is simpler or smaller than the original |
| What is the order of operations? | Order of operations is a series of steps to solve or simplify numerical expressions.   1. Perform operations in **grouping symbols** first 2. Find the values of the number with **exponents** 3. **Multiply or divide** from left to right as ordered in the problem. 4. **Add or subtract** from left to right as ordered in the problem. |
| Helpful Hint:  The following chart resembles a hopscotch board. It is to remind you that when you land on multiplication/division, or addition/subtraction, both of your legs are touching a box which means that you must do whichever one comes first from left to right. | ÷  +  X  E  G  - |
| Practice Problems  9 + 12 x 2 | 33 |
| 4 x 32 + 8 – 16 | 28 |
| 5 + 12 ÷ 6 – 3 | 4 |
| 42 + 48 ÷ (10 –4) | 24 |
| 81 ÷ (9 x 9) + 42 | 17 |

* *Integer*= A whole number that can be positive or negative
  + Example -9, 8
* *Absolute value*= The distance a value is from zero
  + Example -6, 6
* *Additive Inverse=* Two numbers whose sum is 0 are additive inverses of one another.
  + Example 3 and -3 are additive inverses of one another because 3 + (-3) = 0.

Absolute Value Activity

* + With a -10 to 10 number line (can be tape) on the floor, have two students come to the number line and stand where you direct them as you ask the class the questions that follow.
    1. Person A stand on -5. Person B stand on 5. Which person is closer to 0?
    2. Person A stand on 4. Person B stand on -4. Which person is closer to 0?
  + Emphasize again that absolute value is a distance, and distance is measured in positive units.