3.6 Order of Operations with Rational Numbers

* Explain and apply the order of operations with rational numbers

In lesson 3.1 you learned that integers and fractions are rational numbers. So, the order of operations for all rational numbers is the same as that for integers and fractions:

1. Do the operations in brackets first
2. Do any work with exponents
3. Multiply and divide, in order, from left to right
4. Add and subtract, in order, from left to right.

**Using the Order of Operations with Decimals**

Example #1 Example #2

(-0.8) + 1.2 ÷ (-0.3) × 1.5

**Using the Order of Operations with Fractions**

Example #1

**Solving Problems Using the Order of Operations**

To convert a temperature in degrees Fahrenheit to degrees Celsius, we use the formula:

In Fort Simpson, Northwest Territories, the mean temperature in December is -9.4°F. What is this temperature in degrees Celsius?

You Try:

A family moves from Chicago to Saskatoon. A company that rents moving trucks uses this formula, , to determine the cost, including tax, of renting a truck for *d* days and *k* kilometres, when *k*> 120. The distance from Chicago to Saskatoon in 2400 km. and the family travels for 4 days.

What is the cost to rent the truck?