**4.2 Integral Exponents**

Goals

* Applying the exponent laws to expressions using rational numbers or variables as bases and integers as exponents
* Converting a power with a negative exponent to an equivalent power with a positive exponent
* Solving problems that involve powers with integral exponents

Vocabulary

None

Formulas

1. Please write down all of the exponent rules with their proper names

Examples

1. Write each product or quotient as a power of a single exponent.
   1. (5 )( 5 )
   2. (0.8 ) (0.8 )
   3. X / x
   4. (2x) / (2x)
2. Write each expression as a power with a single, positive exponent. Then evaluate when possible.
   1. (4 )
   2. [(a )( a )]
   3. (2 /2 )
   4. [ (3/4) (3/4) ]
3. It is estimated that there are 117 billion grasshoppers in an area of 39 000 km² of Saskatchewan. Approximately how many grasshoppers are there per square kilometer?

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