Name:_____   Date:_____

Notes
Algebra Section 2.6
Pages 103-108

Goal: "You will divide real numbers"

Vocabulary:
Multiplicative Inverse: _____

Property:
Inverse Property of Multiplication: The _____ of a _____ number and its
_____   _____ is _____.

Example:

The multiplicative inverse of $-\frac{1}{5}$ is -5 because $-\frac{1}{5} \cdot (-5) = 1$

The multiplicative inverse of $-\frac{6}{7}$ is $-\frac{7}{6}$ because $-\frac{6}{7} \cdot \left(-\frac{7}{6}\right) = 1$

Try These:

What is the multiplicative inverse of 7 ? _____

What is the multiplicative inverse of -8 ? _____

What is the multiplicative invers of $-\frac{2}{3}$? _____

Dividing Positive and Negative Numbers:

Negative÷Negative=Positive   Negative÷Positive=Negative   Positive÷Negative=Negative

Examples:

$-20 \div \left(-\frac{5}{3}\right)=$ $-\frac{3}{8} \div \frac{3}{10} =$ $16 \div (-4) =$

Try These:

$-35 \div 7 =$ $12 \div (-3) =$ $-18 \div (-6) =$

$-\frac{5}{2} \div (-7) =$ $1.2 \div (-3) =$ $\frac{1}{2} \div (-4) =$

$7 \div (-2) =$ $-4 \div (-8) =$ $-\frac{3}{4} \div \left(-\frac{3}{8}\right) =$

Finding the Mean:

Example: The table gives the daily minimum temperatures (in degrees Fahrenheit) in Barrow, Alaska, for the first 5 days of February 2004. Find the mean daily minimum temperature.

Day in February	1	2	3	4	5
Minimum Temperature (F°)	-21	-29	-39	-39	-22

Mean: $\dfrac{-21+(-29)+(-39)+(-39)+(-22)}{5}$ = $\dfrac{-150}{5}$ = $-30°F$
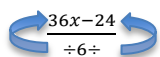
Try This:

Find the mean maximum temperature (in degrees Fahrenheit) in Barrow, Alaska, for the first 5 days of February 2004.

Day in February	1	2	3	4	5
Maximum Temperature (F°)	-3	-20	-21	-22	-18

Simplifying an Expression (Division):

Example: $\dfrac{36x-24}{6}$ = $\dfrac{1}{6}(36x-24)$ = $6x-4$

*Note: Each term in the numerator is divided by the denominator.

$\dfrac{36x-24}{÷6÷}$

Try These:

$\dfrac{20x+15}{5}$ $\qquad\qquad$ $\dfrac{2x-8}{-4}$ $\qquad\qquad$ $\dfrac{-6y+18}{3}$ $\qquad\qquad$ $\dfrac{-10z-20}{-5}$