Notes 2.6

**Vocabulary: Multiplicative Inverse**---the reciprocal of a nonzero number *a*, written

Inverse Property of Multiplication for Real Numbers

The product of a nonzero number and its multiplicative inverse is 1.

Algebra: a() = 1, where a ≠ 0 Example: 4( = 1

Example: What are the multiplicative inverses of:

, 0, and 3?

, doesn’t exist, and

**Division Rule for Real Numbers:**

To divide a number a by *a* nonzero number *b*, multiply *a* by the multiplicative inverse of *b*.

Algebra: a ÷ b = a(), where b ≠ 0. Example: 7 ÷ 2 = 7() or 7 \*

**The Sign of a Quotient:**

1. The quotient of two real numbers with the same sign is positive.
2. The quotient of two real numbers with different signs is negative.
3. The quotient of 0 and any nonzero real number is 0.

Example: (-4) ÷ (-2) = = 2

(9) ÷ (-3) = = -3

(0) ÷ (-8) = = 0

Example: Find the mean temperature of Barrow, Alaska if the temperatures in February were -22, -24, -36, -39 in degrees Fahrenheit.

Mean = Average = = = -30 ᵒF

Example: Simplify the expression:

+

-3x + 2