2.1, 2.5, 2.7 Quiz
Study Guide

2.1: Real Numbers

- **Order numbers from least to greatest:**

Ex: $0.5, -\frac{1}{2}, 1, 0, \frac{5}{2}$

$-\frac{1}{2}, 0, 0.5, 1, \frac{5}{2}$

Ex: $\frac{3}{2}, -0.25, -\frac{1}{5}, 2, 0$

$-0.25, -\frac{1}{5}, 0, \frac{3}{2}, 2$

Ex: $-\frac{1}{5}, 6, -0.25, \sqrt{3}$

$-0.25, -\frac{1}{5}, \sqrt{3}, 6$

- **Find opposites of numbers:**

Ex: Find: $-a$ if $a = -7$

$-a = 7$

Ex: Find: $-y$ if $y = 3.6$

$-y = -3.6$

- **Find absolute value of numbers and perform operations with absolute value:**

Ex: $|-1.3|$

1.3

Ex: $|5|$

5

Ex: $12 - |-4|$

$12 - 4 = 8$

Ex: $|7 - 20| + 5$

$|-13| + 5$
$13 + 5$
18

Ex: $|-3 + 1|$

$|-2|$
2

Ex: $|4 - 6 + 3|$

$|1|$
1

- **Classify numbers using "whole," "integer," and "rational" and "irrational":**

	Rational	Irrational	Integer	Whole
-5	Yes	No	Yes	No
0.6	Yes	No	No	No
175	Yes	No	Yes	Yes
$-\frac{26}{4}$	Yes	No	No	No
$0.6\overline{1}$	Yes	No	No	No
$\sqrt{18}$	No	Yes	No	No

2.5: Apply the Distributive Property

- **Be able to use the distributive property and identify and combine like terms**

Ex: $(p-3)(-8)$

$-8p + 24$

Ex: $3(m+5)-10$

$3m + 15 - 10$
$3m + 5$

Ex: $6r + 2(r+4)$

$6r + 2r + 8$
$8r + 8$

Ex: $4 - 2(x-3) - 3x$

$4 + -2x + 6 - 3x$
$10 + -5x$

- **Be able to simplify division problems using the distributive property**

Ex: $\frac{6x-14}{2}$

$3x - 7$

Ex: $\frac{9z-6}{-3}$

$-3z + 2$

Ex: $\frac{-24a-10}{-8}$

$3a + \frac{5}{4}$

2.7: Find Square Roots and Compare Real Numbers

Ex: $x^2 = 49$

$x = \pm 7$

Ex: $\pm\sqrt{100}$

± 10

Ex: $-\sqrt{3600}$

-60

Ex: Estimate $\sqrt{101}$ between 2 integers

10 and 11

Ex: Estimate $-\sqrt{72}$ between 2 integers

-9 and -8