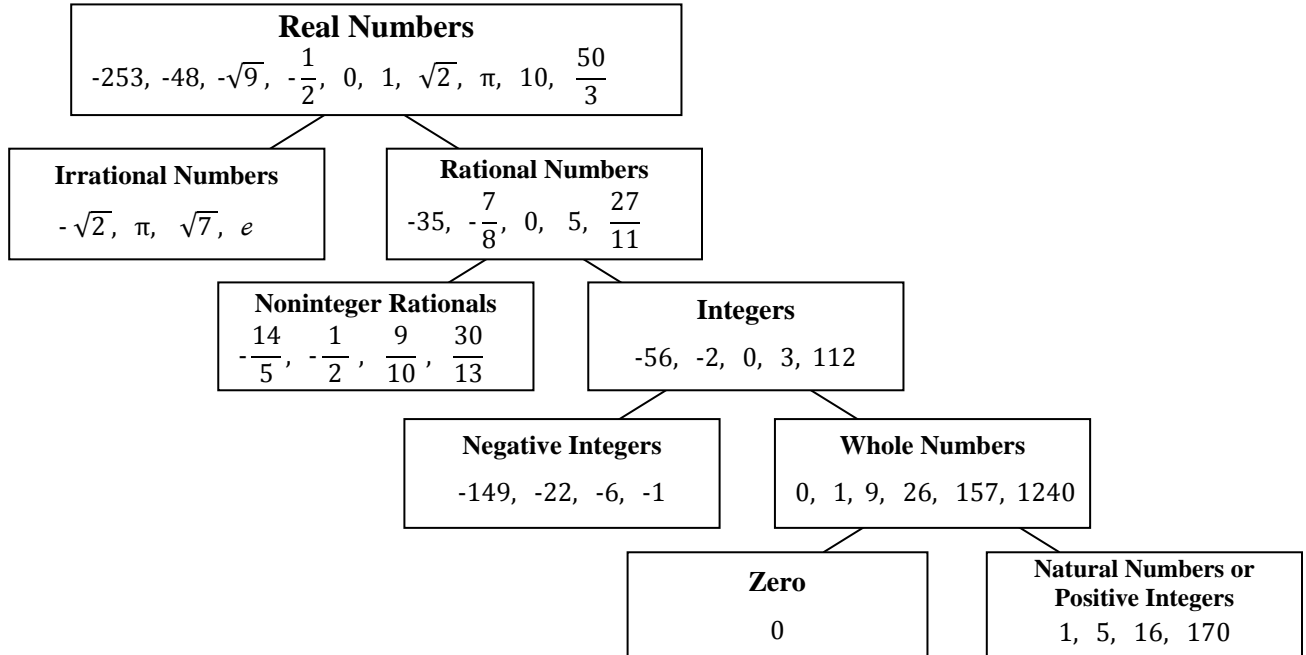


MAT 011 - Review Practice A

Name _____

Text Sections 1.2, 1.3, 1.5, 1.6 & 1.7

Common Sets of Numbers: The following diagram summarizes the relationships among the different sets of real numbers. Examples for each type of number are listed in the boxes below for you to review. For further explanation please see *Section 1.2* (pgs. 9 - 12) in the Multimedia Textbook.



Brief Review of Signed Number Operations: Read through the following information to review the rules for adding, subtracting, multiplying and dividing positive and negative numbers. Fill in the missing values in the blanks provided for the *You Try It Problems*.

Adding Signed Numbers

1. If the two numbers have the SAME sign, then ADD the numbers together. The sign of the answer will be the SAME sign as the original numbers.

Example Problems	You Try It Problems
1. $4 + 7 = 11$	a. $8 + 15 = \underline{\hspace{2cm}}$
2. $-10 + (-20) = -30$	b. $-7 + (-2) = \underline{\hspace{2cm}}$
3. $\frac{1}{8} + \frac{5}{8} = \frac{6}{8} = \frac{3}{4}$ <i>Since these fractions already have a common denominator of 8, just add the numerators. Reduce the fraction by dividing both the numerator and denominator by 2.</i>	c. $\frac{6}{5} + \frac{9}{5} = \underline{\hspace{2cm}}$
4. $39 + 9 = 48$	d. $\frac{-3}{14} + \frac{-5}{14} = \underline{\hspace{2cm}}$
5. $\frac{-2}{5} + \frac{-3}{5} = \frac{-5}{5} = -1$ <i>Since these fractions have a common denominator of 5, add the numerators and reduce the final fraction if possible.</i>	e. $-9 + (-11) = \underline{\hspace{2cm}}$

Check your answers at the bottom of pg. 3.

Multiplying & Dividing Signed Numbers

1. If the two numbers have the SAME sign, then the product or quotient is POSITIVE.

Example Problems	You Try It Problems
1. $2 \cdot 6 = 12$	p. $15 \cdot 3 = \underline{\hspace{2cm}}$
2. $(-11)(-5) = 55$	q. $(-7)(-9) = \underline{\hspace{2cm}}$
3. $\frac{18}{2} = 9$	r. $\frac{-48}{-3} = \underline{\hspace{2cm}}$
4. $\frac{-2}{5} \cdot \frac{-10}{3} = \frac{-2}{\cancel{5}^1} \cdot \frac{\cancel{-10}^{-2}}{3} = \frac{4}{3}$	s. $\frac{1}{4} \cdot \frac{12}{5} = \underline{\hspace{2cm}}$
<i>A least common denominator is not needed for multiplying or dividing fractions; just multiply the numerators and multiply the denominators. You can cancel any common factors before multiplying. Reduce the answer if possible.</i>	t. $\frac{-3}{8} \cdot (-24) = \underline{\hspace{2cm}}$

2. If the two numbers have DIFFERENT signs, then product or quotient is NEGATIVE.

Example Problems	You Try It Problems
1. $-9 \cdot 4 = -36$	u. $-7 \cdot 3 = \underline{\hspace{2cm}}$
2. $(8)(-10) = -80$	v. $(-12)(2) = \underline{\hspace{2cm}}$
3. $\frac{-14}{2} = -7$	w. $\frac{36}{-9} = \underline{\hspace{2cm}}$
4. $\frac{-5}{7} \div \frac{2}{3} = \frac{-5}{7} \cdot \frac{3}{2} = \frac{-15}{14}$	x. $\frac{-3}{7} \div \frac{5}{14} = \underline{\hspace{2cm}}$
<i>To divide two fractions, multiply the first fraction by the reciprocal of the second fraction. You can cancel any common factors before multiplying. Reduce if possible.</i>	y. $\frac{4}{9} \cdot \frac{-3}{2} = \underline{\hspace{2cm}}$

Multiplying & Dividing by 0

- a) Zero multiplied by any number = zero.

$$0 \cdot 7 = 0$$

$$-9 \cdot 0 = 0$$

- b) Zero divided by any number = zero.

$$\frac{0}{-21} = 0$$

$$\frac{0}{7} = 0$$

- c) Any number divided by zero is undefined.

$$\frac{15}{0} = \text{undefined}$$

$$\frac{-21}{0} = \text{undefined}$$

Key for You Try It Problems pgs. 1 – 3.

a. 23	b. -9	c. 3	d. -4/7	e. -20	f. -10	g. 0	h. -5/3	i. -5
j. -1/15	k. -11	l. -51	m. 2	n. 12	o. 2/9	p. 45	q. 63	r. 16
s. 3/5	t. 9	u. -21	v. -24	w. -4	x. -6/5	y. -2/3		