Math 60, Section 1.1, 1.3 Notes **Name:**_____

Section 1.1: Arithmetic with Negative Numbers

Adding

1. Using the Context of Money

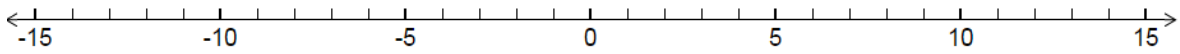
a. $\$6+\$7$

b. $-\$2.10+(-\$7.49)$

c. $\$3+(-\$9)$

d. $-\$10+\$12$

2. Using the Context of a Number Line



a. $4+5$

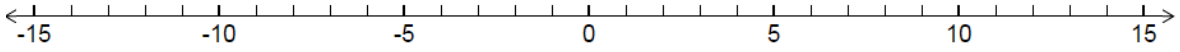
b. $-1+(-6)$

c. $4.5+(-6.25)$

d. $-7+12$

Subtracting

3. Using the Context of a Number Line



a. $4-9$

b. $-3-7$

c. $4-(-6)$

d. $-7.1-(-6.3)$

4. Using the Context of Money

a. $\$10-\$13$

b. $-\$7-\$8$

c. $\$11.75-(-\$7.25)$

d. $-\$4-(-\$9)$

5. Simplifying Longer Expressions

a. $15+(-7)+5-(-14)$

b. $4.5-5-(-11)-(-9)$

Multiplying and Dividing

positive • positive = negative • negative =

positive • negative = negative • positive =

a. –4 • 3 b. –2(–9) c. –12 ÷ 3

d. –40 ÷ (–8) e. –2(3)(–4) f. (–1)(–2)(–3)(–4)

g. –10(–0.5) h. 100(–0.4) i. –5.2(–6.1) if 52 • 61 = 3172

j. –4(0) k. 0 ÷ 4 l. 4 ÷ 0

Exponents

a. $(-4)^2$ b. -4^2

c. $(-2)^3$ d. -2^3

e. $(-5)^4$ f. -5^4

g. $(-1)^{804}$ h. $(-1)^{805}$

Section 1.3: Absolute Value and Square Roots

The absolute value of a number is its distance from 0 on the number line. Distance is always…

a. $|-6|$ b. $-|-1\ 6|$ c. $|-11-6|$ d. $-2|11-20|$

Square Root Facts

a. $\sqrt{81}$ b. $-\sqrt{100}$

Finding Square Roots on the Calculator

a. $\sqrt{15}$ b. $-\sqrt{67}$

Square Roots of Fractions

a. $-\sqrt{\frac{144}{49}}$ b. $\sqrt{\frac{1}{36}}$

Square Roots of Negative Numbers

a. $\sqrt{-36}$ b. $-\sqrt{-\frac{81}{100}}$