**Name: Period: Job 14 Graphing Linear Inequalities**

**Part 1: Textbook**

Textbook Lesson 4-4 Pages 168-169: 16, 18, 20, 24, 25

**Part 2: Algebra Regents Questions –**

**1.** Given the following expressions

 I. $-\frac{5}{8}+\frac{3}{5}$ III. $\left(\sqrt{5}\right)$ \* $\left(\sqrt{5}\right)$

 II. $\frac{1}{2}+\sqrt{2}$ IV. $3$ \* $(\sqrt{49}$

Which expression(s) result in an irrational number?

 (1) II, only (3) I, III, IV

 (2) III, only (4) II, III, IV

**2.** To watch a varsity basketball game, spectators must buy a ticket at the door. The cost of an adult ticket is $\$3.00$ and the cost of a student ticket is $\$1.50$. If the number of adult tickets sold is represented by $a$ and student tickets sold by $s$, which expression represents the amount of money collected at the door from the ticket sales?

 (1) $4.50as$ (3) $4.50\left(a+s\right)$

 (2) $\left(3.00a\right)\left(1.50s\right)$ (4) $3.00a+1.50s$

**3.** Subtract $5x^{2}+2x-11$ from $3x^{2}+8x-7$. Express the result as a trinomial.

**4.** Rowan has $\$50$ in a savings jar and is putting in $\$5 $every week. Jonah has $\$10$ in his own jar and is putting in $\$15$ every week. Each of them plots his progress on a graph with time on the horizontal axis and amount in the jar on the vertical axis. Which statement about their graphs is true?

 (1) Rowan’s graph has a steeper slope than Jonah’s.

 (2) Rowan’s graph always lies above Jonah’s.

 (3) Jonah’s graph has a steeper slope than Rowan’s.

 (4) Jonah’s graph always lies above Rowan’s.

 **5.** Jackson is starting an exercise program. The first day he will spend 30 minutes on a treadmill. He will increase his time on the treadmill by 2 minutes each day. Write an equation for $T\left(d\right)$, the time, in minutes, on the treadmill on day $d.$



Find $T(6)$, the minutes he will spend on the treadmill on day $6$.

**6.** Jacob and Zachary go to the movie theater and purchase refreshments for their friends. Jacob spends a total of $18.25 on two bags of popcorn and three drinks. Zachary spends a total of $27.50 for four bags of popcorn and two drinks.

Write a system of equations that can be used to find the price of one bag of popcorn and the price of one drink.

Using these equations, determine and state the price of a bag of popcorn and the price of a drink, to the *nearest cent.*