

Mr. Northcutt's Math Classes Class Presentation

Friday, October 31, 2008 (41)



Math 1



Math 2



Applied Math

Math 1 – Daily Summary

- **Announcements**

- **Chapter 3 Test on Wednesday**
 - **Sample Test Available Monday**
- **1st Quarter Ends on 11/7**

- **Class Objectives**

- **Solving Inequalities...Putting it All Together!**
 - Adding & Subtracting from both sides
 - Multiplying & Dividing both sides (remember to reverse if negative)

- **Assignment**

- **Lesson 3-4: 3-9 by 3,10,11, 15-39 by 3, 74, 76, 85**

Examples (like solving equations!)

- Solve, Check Answer, & Graph Solution.

$$-3x - 4 \leq 14$$

$$8 > 3(5 - b) + 2$$

Example – Word Problems

- **Write and Solve an Inequality for:**

1. Three times the quantity z plus 2 is greater than 12.

2. The freshman class is planning a party. The cost of a permit to use the city park is \$250. To pay for the permit, there is a fee of \$0.75 for each freshman and \$1.25 for each guest who is not a freshman. Two hundred freshmen plan to attend. Write and solve an inequality to find how many guest must attend for the freshmen to pay for the permit.

HW Solutions (3-4)

3: $x > -2 \frac{1}{2}$

6: $h \geq -2$

9: $c < 2$

10: $t \geq 52.5$

11: $s \leq 9.5$

15: $h > 5$

18: $w \leq 4 \frac{1}{2}$

21: $n \leq 9$

24: $d \leq 6$

27: $s < 10$

30: $m > -\frac{1}{4}$

33: $k \geq \frac{2}{3}$

36: $r \geq 1 \frac{4}{5}$

39: $v \geq 2$

74: $x \leq 0$

76: $c \geq 4$

85: 10 hr.

Math 2 – Daily Summary

- **Announcements**

- Algebra Review Test on Tuesday
 - Sample Test Available Today (and on Website)
- 1st Quarter Ends on 11/7

- **Class Objectives**

- Solving Systems of Equations
 - Graphing, Substitution & Elimination
 - Checking Answers!!!

- **Assignment**

- Systems of Equations Worksheet

Solving Systems of Equations

- **Three Most Common Approaches**
 - Graphing: Good for estimating, but not accurate!
 - Substitution: You know/practiced already...
 - Elimination: We'll work on today.
- **You should use Substitution or Elimination unless explicitly told to graph the equations.**

Graphing, Substitution & Elimination

- **Solve the following system using all 3 methods.**

$$y - x = 2$$

$$x + 3y = 6$$

Focus on Elimination

- **Key Steps for Elimination**

1. Put Equations in Standard Form ($ax + by = c$) – put one above the other (like with numeric addition/subtraction)
2. Multiply one/both equations to get common coefficients
3. Add/subtract to “eliminate” either x or y
4. Solve for one variable then substitute and evaluate to solve for the other

$$y = -x + 4$$

$$3x - 4y = 18$$

Practice – Special Cases

Graph each system after solving.

- These systems have a “twist”.

$$\begin{aligned}2x + 3y &= 7 \\4x + 6y &= 12\end{aligned}$$

$$\begin{aligned}2x + 5y &= 7 \\4x + 10y &= 14\end{aligned}$$

Systems - Word Problems

- **Setup and Solve the following:**
 - Two groups of students order burritos and tacos at a restaurant. One group orders 3 burritos and 4 tacos costing \$11.33. The other group orders 9 burritos and 5 tacos costing \$ 23.56. Find the cost of a burrito and of a taco?

Applied Math – Daily Summary

- **Announcements**

- **Polynomial Test on Tuesday**
 - **Sample Test Available Today (and On Website)**
- **1st Quarter Ends on 11/7**

- **Class Objectives**

- **Dividing Polynomials**

- **Assignment (*Separate Paper - Show All Work - Collect*)**

- **Lesson 5-6: 5-50 by 5**
- **Lesson 5-7: 5-30 by 5**

Dividing Polynomials

- Similar to Multiplying...You can do it the same way you do **long division** with numbers.

$$\frac{x^2 - x - 2}{x + 1} \quad \longrightarrow \quad \begin{array}{r} x - 2 \\ x + 1 \overline{) x^2 - x - 2} \\ - \quad x^2 + x \\ \hline -2x - 2 \\ -2x - 2 \\ \hline 0 \end{array}$$
$$\frac{x^2 - x - 2}{x + 1} = x - 2 \quad \longleftarrow$$

Dividing Monomials

- Another approach can be used (optional) if dividing by a monomial

$$\frac{24a^4 - 16a^2 - 8a}{4a} = \frac{\cancel{4} \cdot 6 \cdot \cancel{a} \cdot a \cdot a \cdot a}{\cancel{4a}} - \frac{\cancel{4} \cdot 4 \cdot \cancel{a} \cdot a}{\cancel{4a}} - \frac{2 \cdot \cancel{4} \cdot \cancel{a}}{\cancel{4a}}$$
$$= 6a^3 - 4a - 2$$

“Remainders” – Similar to Numbers

- **You can (will likely) have a remainder when you divide polynomials.**

$$x + 3 \overline{) 2x^2 + x - 14}$$

HW Solutions (5-6 & 5-7)

5-6

5: $\frac{6}{x^2}$
10: $\frac{y}{x}$
15: $\frac{8}{mn}$
20: $-\frac{3}{y}$
25: $-\frac{23x^2}{7y^2}$
30: $-\frac{2z^2}{3x^3y^2}$
35: $x - y - z$

40: $-3a^2 + 2a - 4$

45: $8x^3z - 6x^2yz^2 - 4y^2$

50: $2wr + 3 - \frac{4}{wr}$

5-7

5: $4x - 3r$ r-3

10: $8x - 11$ r 6

15: $2x^2 - 2x - 12$

20: $2x^2 - 3x$ r 5

25: $4x^2 - 2x + 1$ r -2

30: $3x^2 + 4x - 5$