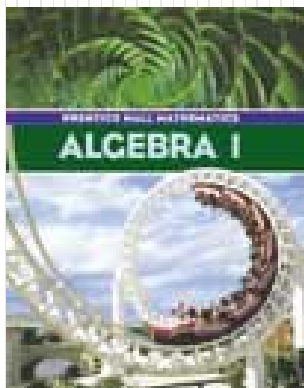
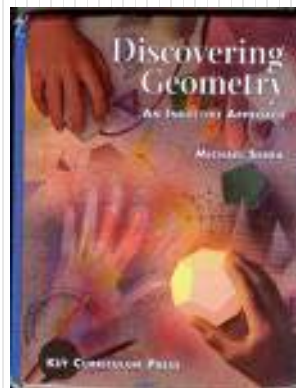


# Mr. Northcutt's Math Classes Class Presentation

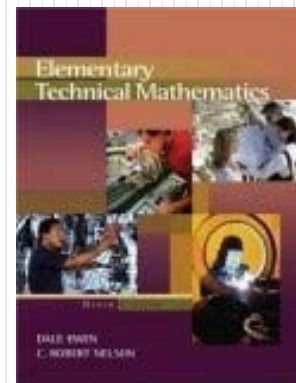
Monday, September 15, 2008 (10)



Math 1



Math 2



Applied Math

# Math 1 – Daily Summary

- **Announcements**

- New Seating Chart (1 week tryout)

- **Class Objectives**

- Quiz Results & Review
- Adding Real Numbers
  - Models (Number Line) and Rules
  - Applications of Addition

- **Assignment**

- Lesson 1-4: 4, 6-36 (by 4), 42-54 EVEN, 76, 79, 81, 92\*

# HW Solutions 1.3 (2)

24: >

25: <

26: >

27: =

28: 2.001, 2.01, 2.1

29:  $-9\frac{3}{4}$ ,  $-9\frac{2}{3}$ ,  $-9\frac{7}{12}$

30:  $-\frac{5}{6}$ ,  $-\frac{1}{2}$ ,  $\frac{2}{3}$

31: -1.01, -1.001, -1.0009

32: 0.63, 0.636,  $\frac{7}{11}$

33:  $\frac{22}{25}$ , 0.8888,  $\frac{8}{9}$

35: 9

37: 0.5

39: 0

41:  $\frac{4}{5}$

47: nat, who, int, rat, real

49: rational 61: 48

51: = 68: sometimes

53: < 70: sometimes

55: = 72: Yes, ratio over 1

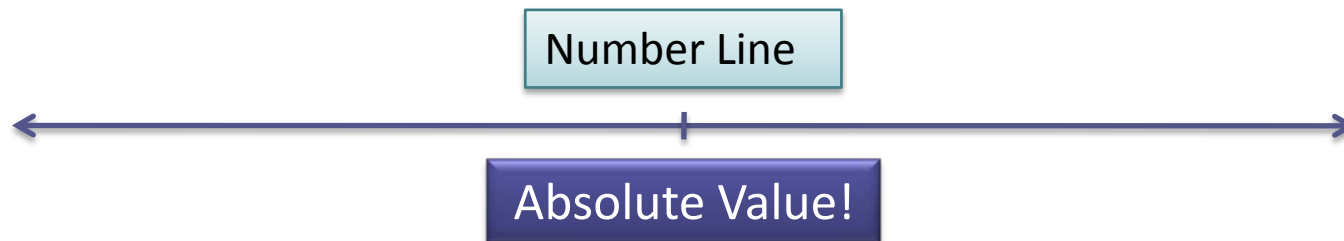
57: 6 74: 17

59: a 76: 10

# Review: Classifying Numbers

A number can belong to more than 1 set.

- **Natural Numbers**  $\{1, 2, 3, 4, \dots\}$
- **Whole Numbers**  $\{0, 1, 2, 3, 4, \dots\}$
- **Integers**  $\{\dots, -2, -1, 0, 1, 2, \dots\}$
- **Rational Numbers**  $\{\frac{p}{q}, \text{ where } p, q \text{ Integers}\}$
- **Irrational Numbers** **{Not Rational}**
- **Real Numbers ( $\mathbb{R}$ )** **{Rational + Irrational}**



# Absolute Value

- The Absolute Value of a number is its DISTANCE from 0 on a number line.

- Absolute Value is a measure of size – **ALWAYS POSITIVE!**

$$|-5| \Rightarrow \text{"the absolute value of -5"} = 5$$

$$|-3.7| =$$

$$\left| \frac{2}{5} \right| =$$

Compare

$$|-12| \square |-11|$$

$$|17 - 5| \square |3 - 15|$$

Like "Grouping"  
for Order of  
Operations

# Test Results

- **Average = 23.5, Low = 9, High = 30 (3)**
- **Most Missed Problems**
  - 2. 6 less than twice p.
  - 4. The quotient of y and the product of 3 and z.
  - 5-7. Identification of variables.
  - 7. Data table to variables and equations.
  - 10-15.

$$3 + 5(7)$$

$$\frac{(8-1)3}{3+4}$$

$$2[5 + 3(7 - 2)]$$

$$3(4) + 2(4 + 2^2) \div 4$$

$$14 + 6 \times 3^2 - 8 \div 2^3$$

$$2 + 2 \cdot 3 - 8 \div 2$$

# Addition of Real Numbers

- **Positive and Negative Numbers (Exercise)**

- Smartboard with Algebra Tiles (to students)
- “Walking the Number Line” (go outside)

- **Properties**

- Identity:  $a + 0 = a$        $5 + 0 = 5$

- Inverse:  $a + (-a) = 0$        $5 + (-5) = 0$

- Adding with Same Sign:       $2 + 6 = 8$        $-2 + (-6) \Rightarrow -8$

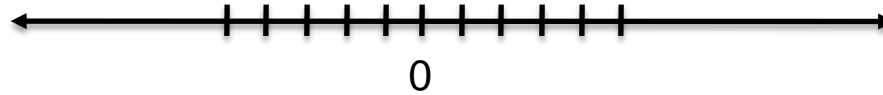
- Sum of absolute values, same sign.

- Adding with Different Sign:  $-2 + 6 = 4$        $2 + (-6) \Rightarrow -4$

- Difference of absolute value, sign of one with larger absolute value.

# Practice

- **Model with Number Line:**  $3 + (-4)$



- **Simplify:**

$$-5 + (-6)$$

$$13 + (-34)$$

$$-1.5 + 3.4$$

$$-\frac{3}{4} + \left(-\frac{1}{2}\right)$$

- **Evaluate for  $t = -7.1$**

$$t + (-4.3)$$

$$-2 + t$$

$$8.5 + (-t)$$



# Math 2 – Daily Summary

- **Announcements**

- New Seating Chart – EFFECIVE TODAY!
- Take-Home Test Due **NOW!**

- **Class Objectives**

- Chapter 1 Test

- **Assignment**

- No HW

# Applied Math – Daily Summary

- **Announcements**

- Update Seating Chart – Move to Front of Room
- Get a Whiteboard

- **Class Objectives**

- Adding & Subtracting Fractions

- **Assignment**

- **Lesson 1.7:** 2, 5, 13, 17, 28, 35, 39, 51, 55, 58, 61, 75, 81

# HW Solutions 1.6

25:  $\frac{3}{10}$

26:  $\frac{1}{8}$

27:  $\frac{1}{2}$

28:  $\frac{5}{48}$

29:  $\frac{4}{7}$

30:  $\frac{49}{72}$

34:  $9 \frac{3}{8}$

35:  $2 \frac{5}{8}$

36:  $2 \frac{1}{4}$

37:  $4 \frac{3}{4}$

38:  $8 \frac{1}{8}$

39:  $2 \frac{5}{16}$

40:  $3 \frac{13}{16}$

45:  $9 \frac{13}{24}$

46:  $11 \frac{31}{48}$

47:  $2237 \frac{1}{4}$  ft.

48:  $12 \frac{15}{16}$  ft.

49: a.  $6 \frac{1}{4}$  ft. b.  $1 \frac{1}{2}$  ft.

50:  $\frac{1}{32}$  in.

# Adding & Subtracting Fractions

- **USES: Construction, Drafting, Architecture, Cooking, Mechanics...**
- **COMMON DENOMINATOR then Add/Subtract Numerator**

$$\frac{a}{c} \pm \frac{b}{c} = \frac{a \pm b}{c}$$

- **To find Least Common Denominator:**
  - Prime Factorization for each denominator
  - $LCD = p_1^{\max\#} \cdot p_2^{\max\#} \cdots p_n^{\max\#}$

# Example

- Add:  $\frac{1}{4} + \frac{1}{6} + \frac{1}{16} + \frac{7}{12}$

- Find LCD:

$$4 = 2^2$$

$$6 = 2 \cdot 3$$

$$16 = 2^4$$

$$12 = 2^2 \cdot 3$$



$$LCD = 2^4 \cdot 3 = 48$$

- LCD Equivalent Fractions

$$= \frac{12}{48} + \frac{8}{48} + \frac{3}{48} + \frac{28}{48}$$

$$= \frac{51}{48}$$

$$= \frac{17}{16} = 1\frac{1}{16}$$

# Practice

- **Add the following fractions:**

$$\frac{1}{9} + \frac{1}{15} + \frac{5}{21}$$

- **Subtract the following fractions:**

$$8\frac{1}{4} - 4\frac{7}{16}$$

Adding &  
Subtracting Mixed  
Numbers

# Practice

- Find (a) the missing dimension and (b) the perimeter.

