

Mr. Northcutt's Math Classes Class Presentation

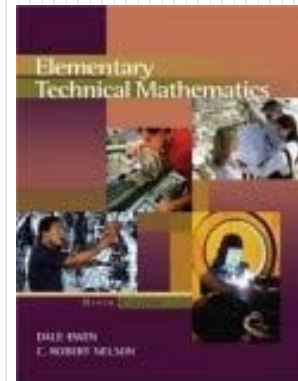
Tuesday, October 7, 2008 (25)



Math 1



Math 2



Applied Math

Math 1 – Daily Summary

- **Announcements**

- Quiz Tomorrow: 2-1 thru 2-4
- Early Release on Wednesday

- **Class Objectives**

- More Solving Equations
 - Variables on Both Sides
 - Special Cases:
 - Identity & No Solution

- **Assignment**

- Lesson 2-4: 3-27 (by 3)



HW Answers: 2-3 (2)

21: 11

24: 7

27: $3/14$

30: 2

33: 3.5

36: 6

39: 2

42: 20

45: $5 \frac{3}{5}$

48: -0.48

53: Varies; Multiply by -2

54: 5

55: $4 \frac{2}{3}$

56: 7 h

57: 92 mi

58: 120 min

59: Varies; $3x+5-4x+9$

Solving Equations...So Far



- The “=” sign is like a **BALANCED SCALE**

- Must do the same thing to both sides
- Goal is to **SOLVE** = ISOLATE THE VARIABLE!

Get Whiteboards!

- So far we have learned to:

- **ADD/SUBTRACT** from both sides of an equation to solve.
- **MULTIPLE/DIVIDE** both sides of an equation to solve.
- Combine **LIKE TERMS** to simplify an equation.
- Use the **DISTRIBUTIVE PROPERTY** to remove “(…)” or “[…]”.
- And...we know how to handle **Fractions** and **Decimals**.

- **Today: Variables on Both Sides and Special Cases**

Steps for Solving Equations



1. **Clear Fractions and Decimals.**
2. **Use Distributive Property to remove parentheses.**
3. **Combine Like Terms.**
4. **Undo Addition/Subtraction.**
5. **Undo Multiplication/Division.**



Put this in your Notebook!

Variables on Both Sides



$$6x + 3 = 8x - 2$$



$$-6d = d + 4$$



Practice (Variables on Both Sides)



$$2(c - 6) = 9c + 2$$

$$7k - 4 = 5k + 16$$

-2

10

Practice (Word Problems)



- **A hairdresser is considering ordering a certain shampoo. Company A charges \$4 per 8-oz bottle plus a \$10 handling fee per order. Company B charges \$3 per 8-oz bottle plus a \$25 handling fee per order. How many bottles must the hairdresser buy to justify using Company B?**

Identities and No Solutions



$$10 - 8a = 2(5 - 4a)$$

$$6m - 5 = 7m + 7 - m$$

Practice (Identities/No Solution)



$$9 + 5n = 5n - 1$$

$$9 + 5x = 7x + 9 - 2x$$

Math 2 – Daily Summary

- **Announcements**

- Early Release on Wednesday

- **Class Objectives**

- Parallel Lines
 - Transversal
 - Corresponding, Alternate Interior & Alternate Exterior Angles
 - Converse of Parallel Lines Conjecture

- **Assignment**

- **Lesson 4.2:** 1-9, 18,19

HW Answers: 4-1

1: $a=60^\circ$, $b=120^\circ$, $c=120^\circ$

2: $a=90^\circ$, $b=90^\circ$, $c=50^\circ$

3: $a=77^\circ$, $b=52^\circ$, $c=77^\circ$,
 $d=51^\circ$

4: $a=60^\circ$, $b=120^\circ$, $c=120^\circ$,
 $d=115^\circ$, $e=65^\circ$, $f=115^\circ$,
 $g=125^\circ$, $h=55^\circ$, $i=125^\circ$

5: $a=90^\circ$, $b=163^\circ$, $c=17^\circ$,
 $d=110^\circ$, $e=70^\circ$

6: 35°

7: Don't add to 180°

8: 60° , 120°

9: 45° angles

10: H, I, O, X

11: I, H, N, O, S, X, Z

12:

13: North

14:

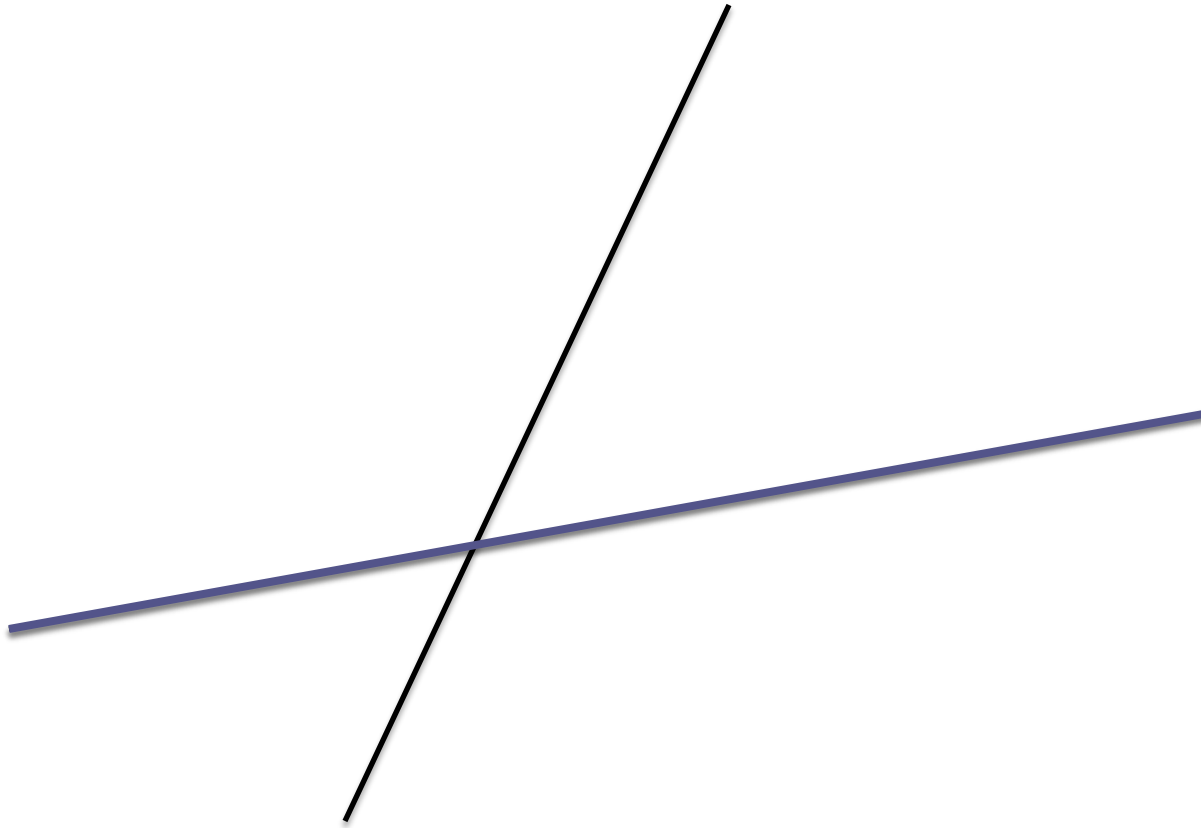
15: 144°

16:

17: They are each 90°

Investigation

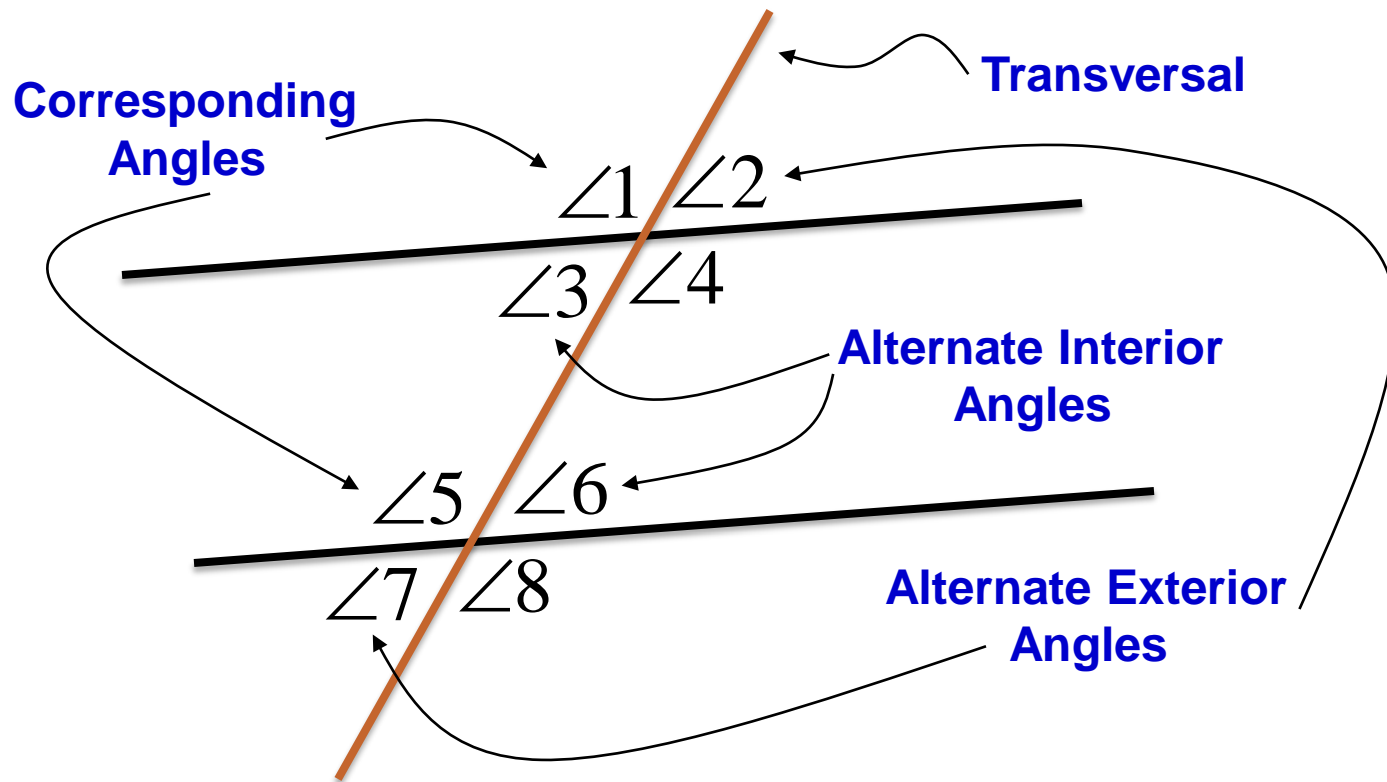
- **What did we learn about angles yesterday?**



Transversal – Angle Pairs

- **Transversal**

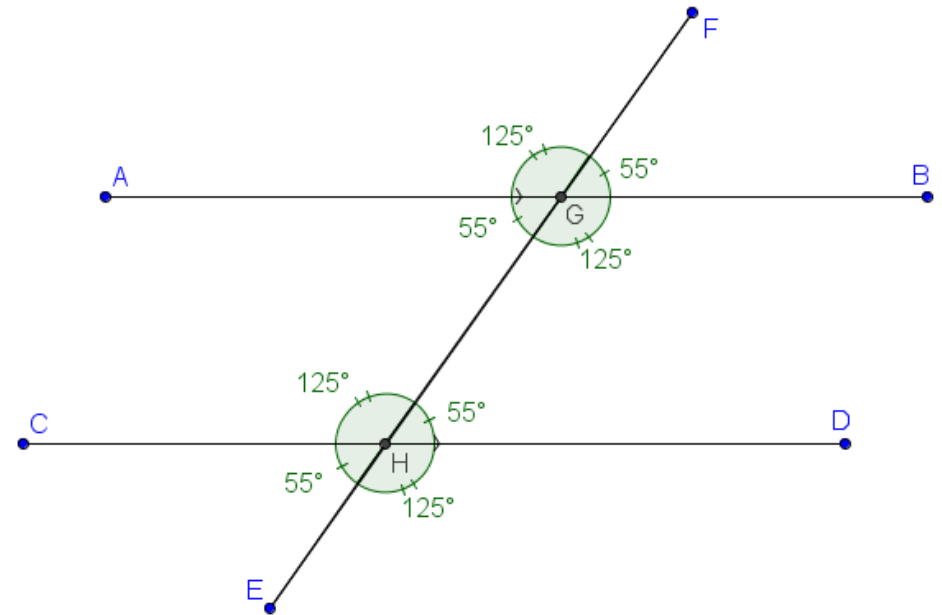
- A line intersecting two or more other coplanar lines.



Parallel Line Conjecture

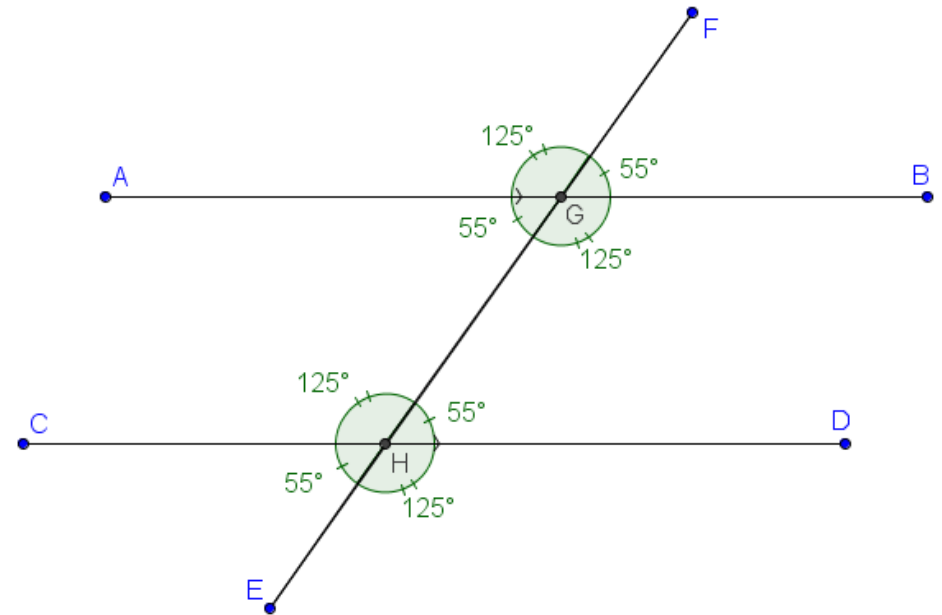
- **Parallel Line Conjecture**

- If two parallel lines are cut by a transversal, then corresponding angles are congruent, alternate interior angles are congruent, and alternate exterior angles are congruent.



Converse of Parallel Line Conjecture

- **Parallel Line Conjecture**
 - If two lines are cut by a transversal to form pairs of congruent corresponding angles, congruent alternate interior angles, and congruent alternate exterior angles, then the lines are parallel.



Applied Math – Daily Summary

- **Announcements**

- Early Release on Wednesday
- Chapter 3 (Metric System) Test on Monday

- **Class Objectives**

- Metric Mass/Weight (grams, g)
- Metric Area and Volume (m^2 , hectare, m^3 , liter)

- **Assignment**

- Lesson 3.3: 2-50 EVEN
- Lesson 3.4: 3-51 (by 3)

SI Prefixes (like our decimal system)

Multiple	Power of 10	Prefix	Prefix Symbol
1,000,000,000,000	10^{12}	tera-	T
1,000,000,000	10^9	giga-	G
1,000,000	10^6	mega-	M
1,000	10^3	kilo-	k
100	10^2	hecto-	h
10	10^1	deca-	da
0.1	10^{-1}	deci-	d
0.01	10^{-2}	centi-	c
0.001	10^{-3}	milli-	m
0.000001	10^{-6}	micro-	μ
0.000000001	10^{-9}	nano-	n
0.000000000001	10^{-12}	pico-	p

Base Metric Unit (see p. 125)

- **US is the only non-metric industrialized nation in the world!**

Base Unit	SI* Abbreviation	For Measuring
meter	m	length
kilogram	kg	mass
second	s	time
ampere	A	electric current
kelvin	K	temperature
candela	cd	light intensity
mole	mol	molecular substance

* SI is abbreviation for International System.

Mass vs. Weight

- **General public often use terms interchangeably...Wrong!**
- **Weight**
 - Measure of Earth's gravitational force (weight on moon?)
- **Mass**
 - Quantity of material making up the object (constant)

SI (Metric) Mass

- SI (Metric) basic unit of mass is the kilogram (**kg**).

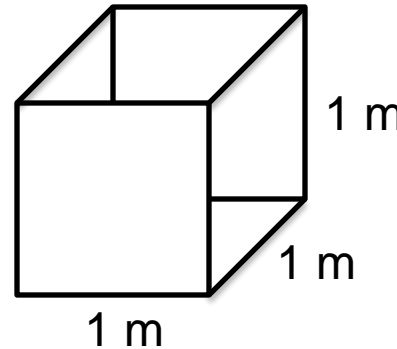
Multiple	Prefix	Prefix Symbol
1,000,000	mega-	Mg “Metric Ton”
1,000	kilo-	kg
100	hecto-	hg
10	deca-	dag
1	-	g
0.1	deci-	dg
0.01	centi-	cg
0.001	milli-	mg
0.000001	micro-	μ g
0.000000001	nano-	ng
0.000000000001	pico-	pg

1 kg = Mass contained in 1 cubic decimeter (dm³) of water.

SI (Metric) Volume

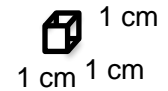
- SI (Metric) basic unit of Volume is **length cubed (m^3)**.

- m^3 , cm^3 , mm^3 , km^3 ,...



$$1 m^3 = 1,000,000 cm^3$$

$$1 m = 100 cm$$



- A **Liter (L)** is defined as the volume of 1 cubic decimeter (dm^3)

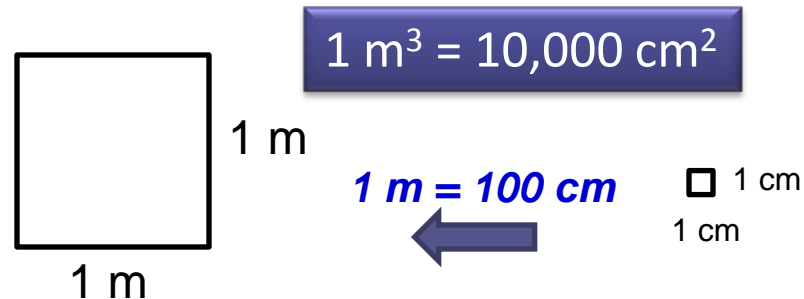
$$1 L = 1 dm^3 = \underline{\hspace{2cm}} cm^3$$

“Liter is a measure of Volume”

SI (Metric) Area

- SI (Metric) basic unit of Area is **length squared (m^2)**.

- m^2 , cm^2 , mm^2 , km^2 ,...



- An **Hectare (ha)** is defined as the area of **1 square decimeter (dm^2)** (= 10,000 m^2)

Basic unit of Land Area.

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