Mathematics Class Slides
Bronx Early College Academy

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18 October 2021

BECA / Dr. Huson / Geometry Unit 3

3.2 Area and volume formulas, 19 October

3.3 Transversals problems, 20 October

3.4 Transversals and review , 21 October

3.5 Transversals and review, 22 October

3.6 Sum of triangle angles, 25 October

3.7 Triangle exterior angles, 26 October

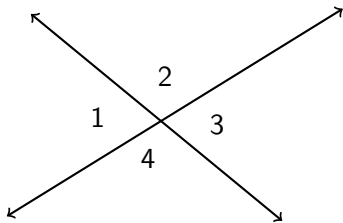414 Seating chart 10.1

420 Seating chart 10.3

Learning Target: I can name parallel lines transversal angles

HSG.CO.C.9 Prove theorems about lines and angles   3.2 Tuesday 19 October

Do Now: Identify the true statements

1. $\angle 1 \cong \angle 2$

2. $\angle 2 \cong \angle 4$

3. $m\angle 1 + m\angle 4 = 180°$

4. $m\angle 2 + m\angle 3 = 90°$

Lesson: Parallel lines and transversal angles

Homework: Deltamath 3.2; Test corrections due Friday

Angle relationships

Review: Angle postulates and theorems you have learned.

1. $\perp$ lines and complementary $\angle$s make $90°$
2. linear pairs add to $180°$
3. vertical $\angle$s are $\cong$
4. definition of an angle bisector

New terminology for parallel lines
Parallel lines are in the same plane and never intersect

1. *parallel lines*, symbol: ∥
   tick marks

2. *transversal line*

3. *interior, exterior* ∠s

4. *same-side, alternate* ∠s
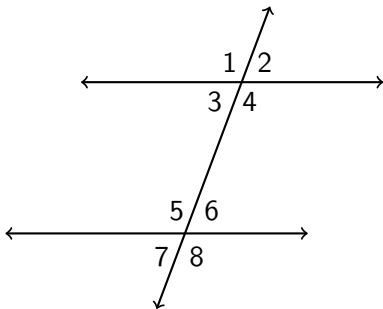
New theorems for parallel lines

1. *corresponding* ∠s of ∥ lines
   are ≅
   ∠2 ≅ ∠6

2. *same-side interior* ∠s are
   supplementary
   $m\angle 3 + m\angle 5 = 180$

3. *alternate exterior* ∠s are ≅
   ∠2 ≅ ∠7
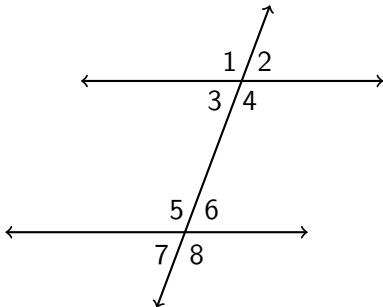
Hint: There are only two angle measures, the acute angles and the obtuse angles
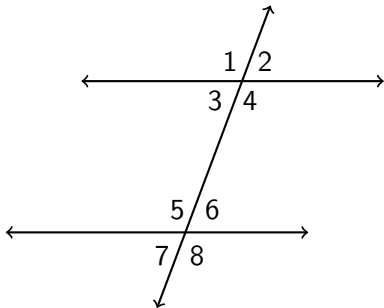(and they add to $180°$)

Learning Target: I can calculate transversal angles

HSG.CO.C.9 Prove theorems about lines and angles   3.3 Wednesday 20 October

Do Now: Identify each angle

1. Opposite $\angle 4$

2. Corresponding to $\angle 3$

3. Alternate exterior to $\angle 8$

4. Same side interior to $\angle 5$

5. Alternate interior to $\angle 4$

Lesson: Parallel lines with transversals, algebra

Homework: Deltamath 3.3

Learning Target: I can calculate transversal angles
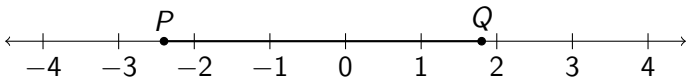
HSG.CO.C.9 Prove theorems about lines and angles   3.4 Thursday 21 October

1. Do Now: Given $\overline{DEFG}$, $DE = 3\frac{1}{4}$, $EF = 6\frac{1}{4}$, and $FG = 1\frac{3}{4}$.
   (diagram not to scale)

   Find DG, expressed as a fraction, not a decimal.

   ```
   •————————————•————————————————————•————————•
   D            E                    F        G
   ```

2. Given $P(-2.4)$ and $Q(1.8)$, as shown on the number line.
   Find the length of the line segment $\overline{PQ}$.

   ```
            P                    Q
   ←——+——+——+——+——+——+——+——+——+——→
     −4  −3  −2  −1   0   1   2   3   4
   ```

Lesson: Transversals, review for fractions quiz, notation

Homework: Deltamath 3.4 (spicy)

Learning Target: I can calculate transversal angles

HSG.CO.C.9 Prove theorems about lines and angles   3.5 Friday 22 October

Lesson: Transversals, Exit Note: fractions, notation
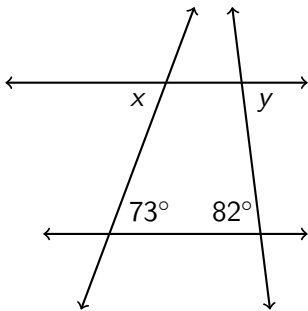
Homework: Deltamath 3.4 (spicy)

Learning Target: I can calculate triangle angles

HSG.CO.C.9 Prove theorems about lines and angles   3.6 Monday 25 October

Do Now:

1. Given two parallel lines, two transversals

2. Find x, y

3. What relationship are you using? (e.g. vertical angles, same-side exterior angles, alternate interior angles, etc.)

Lesson: Sum of a triangle's interior angles is $180°$

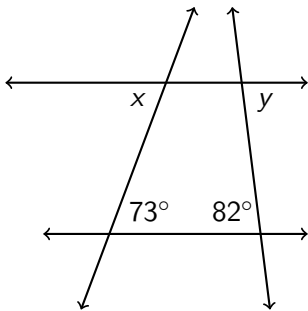Homework: Deltamath 3.6 (Marking Period ends tomorrow)

Learning Target: I can calculate triangle angles

HSG.CO.C.9 Prove theorems about lines and angles   3.7 Tuesday 26 October

Do Now:

1. Given two parallel lines, two transversals

2. Find x, y

3. What relationship are you using? (e.g. vertical angles, same-side exterior angles, alternate interior angles, etc.)

Lesson: Sum of a triangle's interior angles is $180°$

Homework: Deltamath 3.6 (Marking Period ends tomorrow)

Notebook credit
Mastery grades 1 to 4

Take organized notes and study them for the test Friday

1. Well below: Few notes or no notebook
2. Approaching expectations: Many pages of notes in a composition book. Missing several formulas and definitions.
3. Proficient: Well organized composition book with most or all formulas and terminology easy to locate.
4. Extending: Assesses peers and gives constructive feedback.

Notebook leaders:
10.1 Jada, Abigail, Aiden, Nathaliah
10.2 Jakia, Favour, Khudija
10.3 Flora, Jefferson, Catalina

Casio fx-9750GII calculator - due Friday 1 October

In the high school at BECA we use the Casio fx-9750GII.

It is allowed on the Regents exams, SAT tests, and International Baccalaureate exams.

You may use a different calculator in Geometry if you prefer, but I recommend buying the Casio fx-9750GII.

(see me if buying a calculator is a hardship for your family)
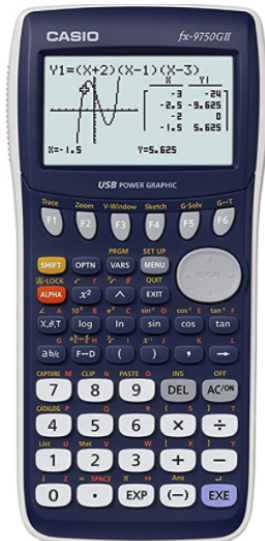
Open Middle problem (fun)
Use digits from 0 to 9. Using a digit no more than once.

The first two angle measures are complementary. The second two angles supplementary. (degrees)

414 Seating chart 10.1

Front of room Video Screen

Steven L.	Sadia Z.	Aiden P.	Isaias A.	Muhamed K	Alex R
Nathaliah P	Alexis N.	Ebrima G	Jonathan R	Jada C.	Ebenezer W
Jeremy D.	Angel M.	Edwin S.	Abigail M.	Robert C.	Justin R
Andrew U.	Ivana T	Emmanuel W	Juan R.	Tyler S.	Andrian A.
Jose M	Roberto V	Joshua S	Yuliana G		
Annette M	Oprah M	Christian V	Jose L		
	Jason R				

420 Seating chart 10.3

Room 420	10.3		Front (screen)			
		5	Yostin F		1	Lessly A
	Chasidy S	Jefferson M	Jada M		Flora A	Taniah G
Jonathan S	Matphew S					
8	Ashley R	6	Zinaira D		2	Catalina M
Leslie	Lisbeth E	Yaeli M	Fariha S		Aminata B	Kelvin A
9	Richard A	7	Christopher S		3	Xiomara A
Ashley O	Cristhian A	Maryelis T	Jarryw B		Juan P	Manny B
Back		10	Oprah M		4	
door		Jason R	Annette M		David A	Anaylis O

Quiz learning targets

7.G.B.6 Solve problems involving area, volume and surface area

Four mastery standards

▶ Solve multi-step real-life and mathematical problems posed
  with positive and negative rational numbers in any form
  (whole numbers, fractions, and decimals), using tools
  strategically. Apply properties of operations to calculate with
  numbers in any form; convert between forms as appropriate;
  and assess the reasonableness of answers using mental
  computation and estimation strategies. For example: If a
  woman making $25 an hour gets a 10% raise, she will make
  an additional $1/10$ of her salary an hour, or $2.50, for a new
  salary of $27.50. If you want to place a towel bar 9 3/4 inches
  long in the center of a door that is 27 1/2 inches wide, you
  will need to place the bar about 9 inches from each edge; this
  estimate can be used as a check on the exact computation.
  (7.EE.B.3)

▶ Use facts about supplementary, complementary, vertical, and