Mathematics Class Slides

Bronx Early College Academy

Chris Huson

9 October 2018

BECA / Dr. Huson / Geometry Unit 1

Project criteria

Notetaking criteria

2.1 Drui: Induction, pattens. Monday 15 October

2.2 Drui: Deltamath. Tuesday 16 October

2.3 Drui: Induction, logic. Wednesday 17 October

2.4 Drui: Conditional statements, logic. Thursday 18 October

2.5 Drui: Converse, contrapositive, definitions. Friday 19 October

2.6 Drui: Deductive logic, two column proofs. Monday 22 October

2.7 Drui: Deltamath. Tuesday 23 October

2.8 Drui: 2-column addition proofs. Wednesday 24 October

2.9 Drui: Review. Thursday 25 October

2.10 Drui: Test. Friday 26 October

2.11 Drui: Addition proofs, transversals. Monday 29 October

2.12 Drui: Deltamath. Tuesday 30 October

2.13 Drui: Transversals. Wednesday 31 October

2.13 Project: Triangle centers paper, Wednesday 31 October

GQ: How do we present mathematical work?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions

Complete binder: Due Friday
Exam 1 + corrections; exam 2 (optional corrections); 5 best construction:
Equilateral triangle, Congruent segment & angles, bisected segment & angle

Criteria for construction projects

1. Complete and correct construction
2. Steps written with proper notation
3. Layout: GQ title, date on left; first & last name on right
4. Precise, elegant, mathematical aesthetic

Grading policy: full credit 20, minus 2 points for each missing

GQ: How do we organize our mathematical notes?

CCSS: HSG.CO.A.1 Know precise geometric definitions

Criteria for notebook project grade (20 points)

1. Your name and "Geometry" on cover
2. Toward front: math.huson.com, husonbeca@gmail.com, 917-648-5632, Deltamath teacher ID: 546068
3. Labeled composition book out during class; GQ, date each day
4. Definitions, postulates, constructions, & theorems
5. Combination of symbols, diagrams, text (best: your own words)
6. Examples, but not practice problem sets

Grading policy: daily tracker, pop notebook checks

GQ: How do we reason logically?

CCSS: HSG.GPE.B.7 Compute areas and perimeters using the distance formula 2-1

Do Now: Area practice. Given the polygon with vertices $M(4,0), A(8,0), T(8,4), H(4,4)$

1. Sketch *MATH*. What kind of polygon is it?
2. Find the area and perimeter of *MATH*.
3. Spicy: A circle is inscribed in the polygon, centered at $C(6,2)$ and touching each side in one spot. Find the area and perimeter of circle C.

2-1 Inductive logic pp. 82-84
Classwork problems 6-30 odds p. 85

Homework: Perimeter & area practice

GQ: How do we use geometric notation?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions 2-2

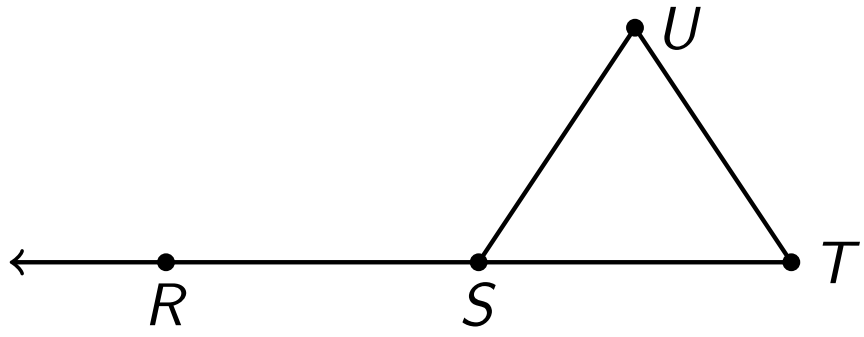
Deltamath practice

Homework: Complete deltamath (10pm deadline)

GQ: How do we apply the equilateral triangle construction?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions 2-3

Do Now:



1. Given $m\angle RSU = 115°$. Find $m\angle TSU$
2. Given S bisects $\overline{RT}$, $RS = \frac{1}{5}(x+8)$ and $ST = x$. Find RT.

Equilateral triangle construction applications, Engage workbook

Homework: Engage workbook

GQ: How do we reason logically?

CCSS: HSG.CO.C.9 Prove geometric theorems 2-4

Do Now: Euclidean constructions

1. Construct a perpendicular to a line through a given point
2. Duplicate a given line segment
3. Bisect a given angle

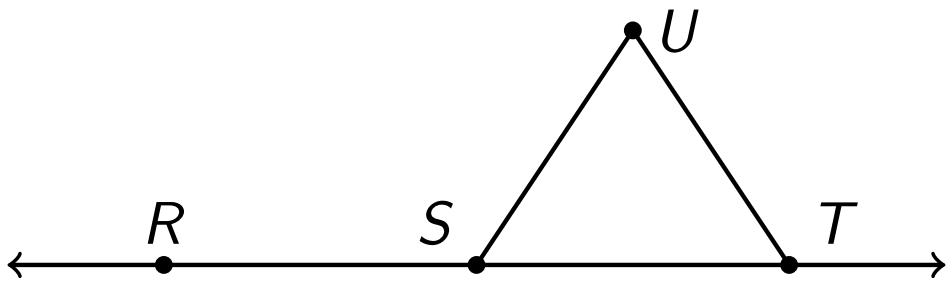
New construction: Duplicate an angle
2-2 Conditional statements, logic pp. 89-92
Classwork problems 5-24 odds p. 93

Homework: Engage workbook Lesson 3 Problem Set p. S.17.
Spicy: Engage workbook Lesson 2 Challenge 1, 2 p. S.8, S.9

GQ: How do we reason logically?

CCSS: HSG.CO.C.9 Prove geometric theorems 2-5

Do Now: Sketch and label the figure shown



1. Name two opposite rays
2. Given $m\angle TSU = 55°$. Find $m\angle RSU$
3. S bisects $\overline{RT}$, $RT = \frac{1}{2}(3x + 15)$ and $ST = x + 3$. Find RS.

2-2 Conditional statements, logic pp. 89-92
Classwork problems 5-24 odds p. 93
Homework: Engage workbook Lesson 4 Problem Set p. S.22-23
Spicy: #3 p. S.24

GQ: How do we use deductive logic?

CCSS: HSG.CO.C.9 Prove geometric theorems 2-6

Do Now: Area practice.

1. Find the area of rectangle with length 3.5 and width 7.1.
2. Find the width of rectangle with length 17.5 and area 84.
3. Spicy: Find the dimensions of a rectangle with area 84 having length five greater than its width.
4. Given an example of the distributive property.

2-5 Congruence, addition proofs pp. 113-116
Classwork problems 5-13 p. 117

Homework: Engage workbook Lesson 5 Problem Set p. S.29-30

GQ: How do we calculate area and perimeter?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions 2.7

Deltamath practice

Homework: Complete deltamath (10pm deadline)
Engage workbook Lesson 6 Problem Set p. S.37

GQ: How do we use deductive logic?

CCSS: HSG.CO.C.9 Prove geometric theorems 2-8

Do Now: Handout review and practice.

Lesson: 2-6 Congruence, addition proofs pp. 120
Classwork problems 5-24 odds p. 124

Homework: Pre-test review packet

GQ: How do we apply the properties of angle pairs?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions 2-9

Do Now: Handout angle calculation problems review and practice.

Lesson: Pretest review of constructions, angle properties, logic terminology, algebraic methods (textbook through p. 105)
Students work packet problems on board

Homework: Study for exam tomorrow

GQ: How do we use the tools of geometry?

CCSS: HSG.CO.A.1 Know precise geometric definitions 2-10

Do Now: (Test)

Test

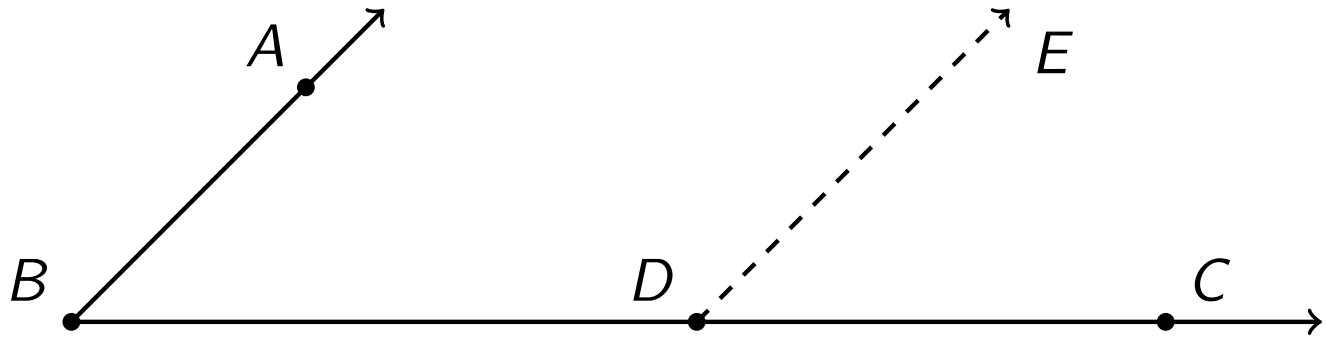
Homework: Angle measure algebra problems

GQ: How do we name the angles of a transversal?

CCSS: HSG.CO.C.9 Prove geometric theorems 2-11

Do Now: Vertical angle proof applications

1. Lesson check #1, 6, 12 p. 124 from textbook
2. Spicy: #33, 34 p. 127
3. Spicy: Given $\angle ABC$, construct duplicate $\angle CDE$



Transversal and corresponding angles pp. 140-142
Classwork problems 17-23 p. 144

Homework: Handout transversal practice and median construction

GQ: How do we construct the centroid?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions 2.12

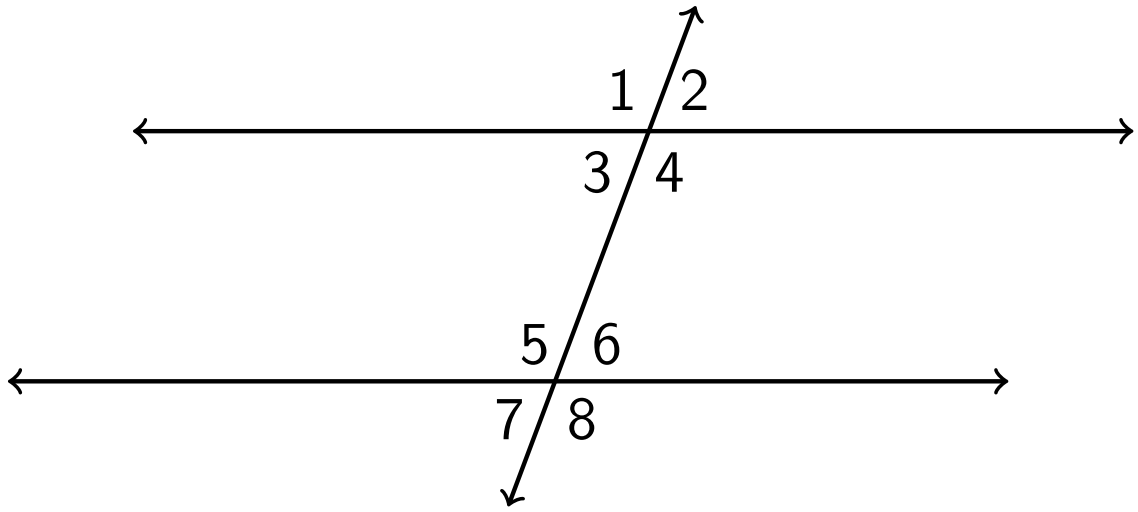
Deltamath practice: triangle centers, transversal practice

Homework: Complete deltamath (10pm deadline)
Graph midpoint practice

GQ: How do we compare the angles of a transversal?

CCSS: HSG.CO.C.9 Prove geometric theorems 2-13

Do Now: Given two parallel lines shown, $m\angle 5 = 110$. Find all other angle measures.



Transversal angle theorems pp. 148-152
Classwork problems 7-9, 12-17 p. 153

Homework: Triangle center project
Engage workbook esson 7 classwork p. S38-39 mild, spicy p. S40

GQ: How do we construct the centroid, circumcenter, incenter, and orthocenter?

CCSS: HSG.CO.C.9 Prove geometric theorems 2-13

Construction project: Triangle centers

1. Circumcenter: perpendicular bisectors
2. Incenter: angle bisectors
3. Orthocenter: altitudes (perpendiculars through vertices)
4. Centroid: medians (midpoint to opposite vertices)

We will have time at Kipps Bay Center. Due Monday