Week Jan. 13-17 Lesson Overview- Midterm Exam Jan. 17-21

Monday - Semester Review by using handout with online BIM site exercises

Focus on # 14-20 problems from chapter 3 on lines and angles with parallel, perpendicular, skew, or intersecting lines

Tuesday - Confinus with review with # 21-37 problems from chapter 5 on congruence in triangles

Wednesday - PDs 1 & 4 work on notebooks and review areas needed such as pythagorean theorem problems.

PD 2 - Continue review with chapter 2 additions on proofs with properties and if then statements.

Thursday - Final review day to develop study and testing aids

Friday - DAY 1 of Math Midterms (multiple choice problems to complete in period)

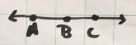
Next week Monday - no class
Tuesday - Day 2 of Midterms with open response problems with MC corrections permitted for the Midterm

Section	Concept	
1.1	Terms: Ray Line Plane etc.	ray have specific endpoint, collinear, coplanar
1.2	Adding Segments	part + part = whole, between
1.3	Distance, Midpoint, Pythagorean Thm	bisect into 2= parts, formula use
1.4	Perimeter Area	need altitude height, triangle
1.5	Adding Angles	part + part = whole
1.6	Angle Pairs	linear, complementary, supplementary, vertical
Section	Concept	
3.1	Skew Lines, Parallel, Perpendicular	transversal, planes
3.2	Angles with Parallel lines	corresponding angles
3.3	cont.	alternate interior or alternate exterior
3.4	cont.	consecutive interior
Section	Concept	
5.1	Triangle Terms, Sum 180	scalene, isosceles, obtuse, equilateral, ...
5.4	Isosceles & Equilateral/Equiangular Triangles	
Section	Concept	
5.3	Congruent Triangles SAS	never the general SSA formation
5.5	Congruent Triangles SSS, HL	
5.6	Congruent Triangles AAS, ASA	AAA is only similar not congruent
Section	Concept	
5.2	Congruent Polygons	ALL = by ORDER in vertice statement
8.1	Similar Polygons	Check BOTH angles and side Fractions
8.2	Similar Triangle AA~A	Sum angles 180
8.3	Similar Triangle SAS, SSS	Check Fractions

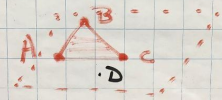
College Prep pd 2 will also have chapter 2 objectives on properties and proofs.

Chapter 1:

Collinear = 2 pts make a line
3 or more on the same line



Coplanar = 3 or more non-collinear pts



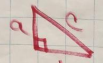
Angles

acute	right	obtuse	Straight
$\angle 90^\circ$	$\perp 90^\circ$	>90 <180	180°

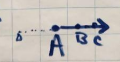
Pairs:
- Complementary: $x + y = 90$
- Supplementary: $m + n = 180$
- Linear Pair
- Adjacent

1/2

Pythagorean Theorem: $a^2 + b^2 = c^2$



Rays



$\overrightarrow{AC}$

Distance $d = \sqrt{(x-x)^2 + (y-y)^2}$

Midpoint $M(x,y) = \left(\frac{x+x}{2}, \frac{y+y}{2}\right)$

Chapter 3

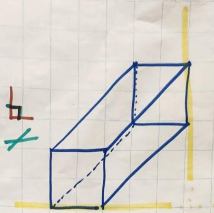
Parallel - Coplanar

Perpendicular - 90° Right Intersection

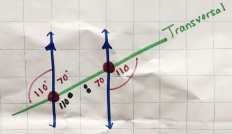
Intersecting Lines at One Point

Coincident (Same) - Collinear

Skew - 3 dimensional
do not intersect



Corresponding
Alternate Interior
Alternate Exterior



Supplementary
$x + y = 180$
Consecutive Interior
(If Parallel lines)

Vertical Angles =
(no need for 3 lines + parallel)

Linear Pair
(Supplementary at 1 intersection)

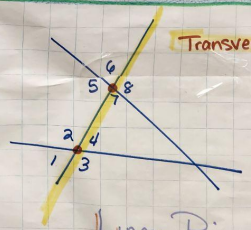
If lines are parallel

★ Corresponding Angles (6,2) (5,1) (8,4)

★ Alternate Interior Angles (5,4) (2,7)

★ Alternate Exterior Angles (6,3) (8,1)

⊐ Consecutive Interior Angles (5,2) (7,4)
180 Supplementary

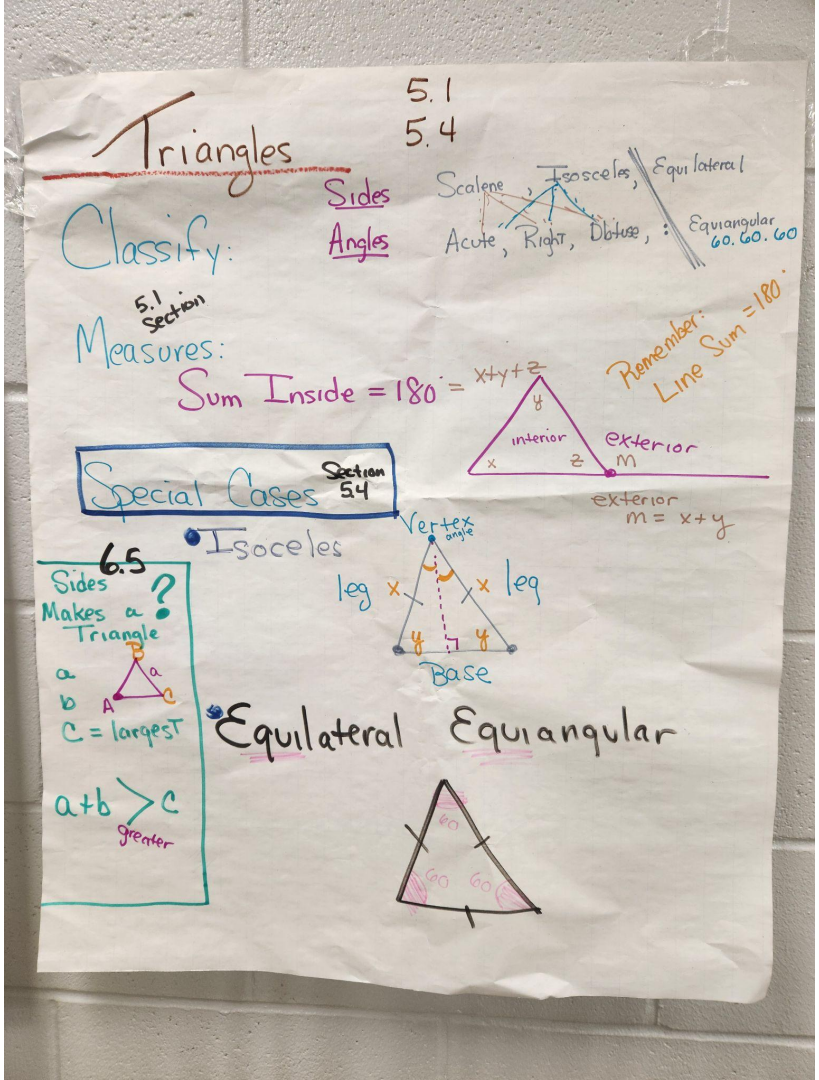


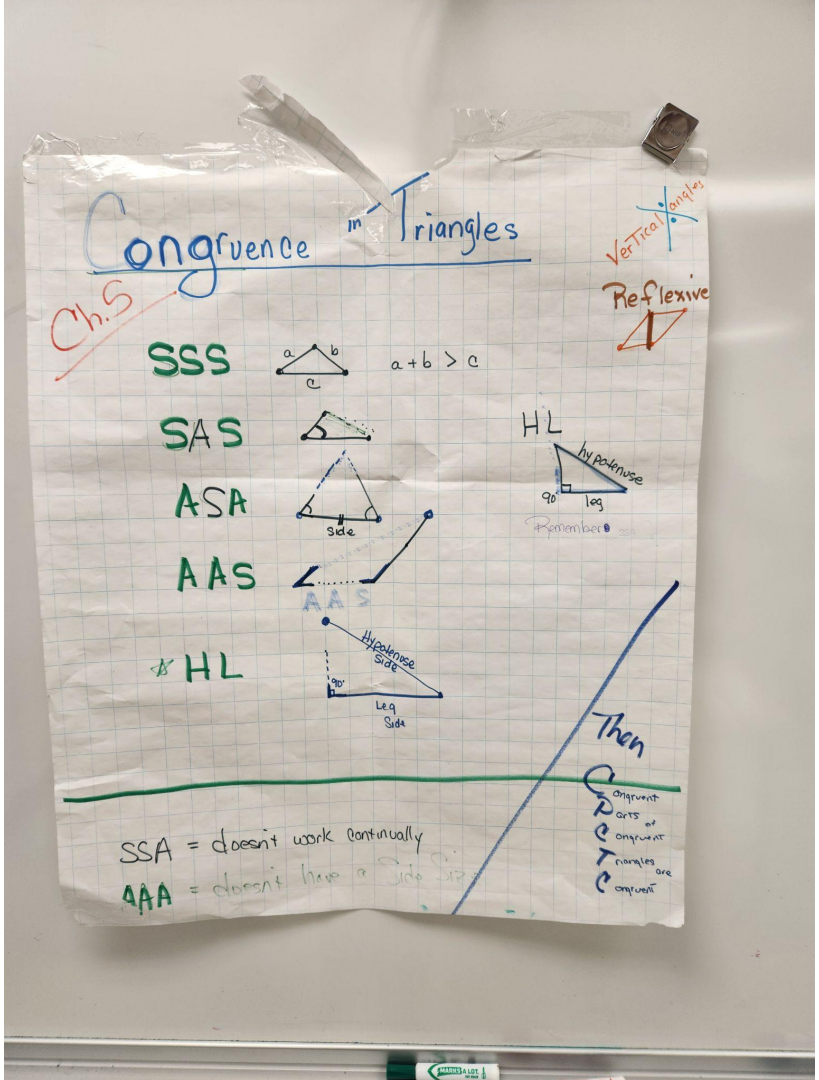
Linear Pair

Vertical Angles

Ch. 5 paper to copy for notes

BOTH



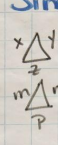


Chapter 8

Congruent vs **Similar**

Congruent: Sides =, Angles =

Similar: Sides (proportion $\frac{x}{m} = \frac{y}{n} = \frac{z}{p}$), Angles =



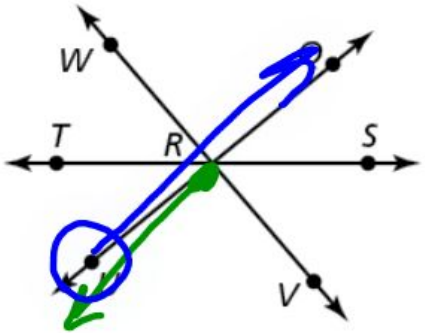
Similar Scale Factor $K = \frac{\text{new side}}{\text{old side}}$

Similar Triangles

- SSS
- AAA = AA ~ Similar Triangles (8.2 Section) — Keeps Shape
- SAS

Line Ray Terms from Ch 1

Answer to this question: **67% Correct** Change this



a. Give another name for $\overline{RS}$. 1 $\overline{SR}$ ✔

b. Name a ray with endpoint U. 1 $\overline{RU}$ ✕

- Fold the paper so that the top right corner is on top of the bottom left corner.
- Fold the paper so that X is on top of M.
- Fold the paper so that X is on top of Y. ✓
- Fold the paper so that Y is on top of M.

Exercise 7

The endpoints of $\overline{VW}$ are $V\,(-4,\ 9)$ and $W\,(1, -6)$. Find the coordinates of the midpoint M.

Coordinates of midpoint M: (1 , 2)

Correct answers:

1	-1.5
2	1.5

midpoint

$\frac{-4+1}{2} = \frac{-5}{2}$, $\frac{9+-6}{2} = \frac{15}{2}$

(4, 9)

(1, -6)

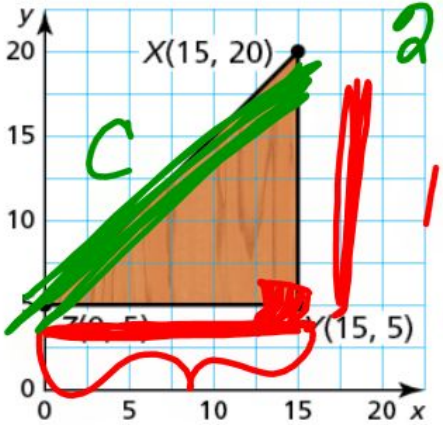
-2.5 , 7.5

Exercise 8

Find the distance FG between the points $F\,(0, -7)$ and $G\,(-6, -3)$. Round your answer to the nearest tenth, if necessary.

Exercise 19

You are building a shelf that fits in a corner. In the figure, the entire shelf is $\triangle XYZ$. Each unit in the coordinate plane represents one inch.



Find the area A of the shelf.

$A =$ 1 in.^{2}

Correct answers:

1 112.5

$a^2 + b^2 = c^2$

$15^2 + 15^2 =$

$225 + 225$

$450 = c^2$

$15\sqrt{450} = c$

use Py. Thm

Perimeter = then

$c = 21.2$ $P = 15 + 15 + 21.2 =$ add sides

$P = 51.2$

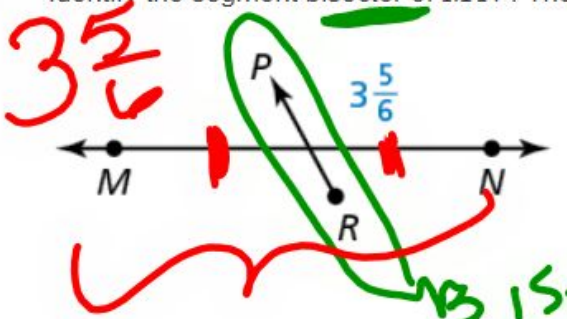
15

$A = \frac{1}{2}bh =$

$\frac{1}{2} \cdot 15(15) = 112.5$ area

Exercise 5

Identify the segment bisector of $\overline{MN}$. Then find *MN*.



Segment bisector: 1

MN = 2

Correct answers:

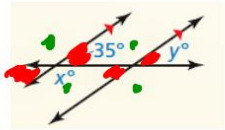
1 $\overrightarrow{RP}$

2 $7\frac{2}{3}$

Parallel Line Angles Ch 3

Exercise 5

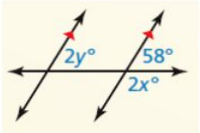
Find the values of x and y.



$x =$ ☐ and $y =$ ☐.

Exercise 7

Find the values of x and y.



$x =$ ☐ and $y =$ ☐.

Exercise 9

Find the value of x that makes $m \parallel n$.

$y = 35$ Corresponding Angles

$X + 35 = 180$

Vertical

Linear Pair

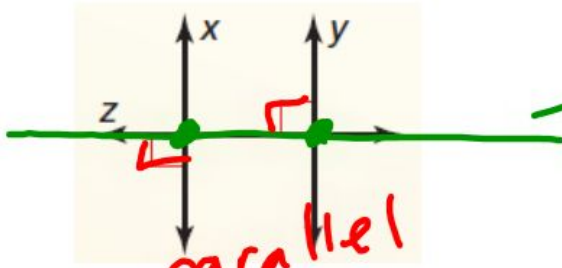
Corresponding

Alt. Int.

Parallel lines from Ch 3

Exercise 13

Determine which lines, if any, must be parallel.

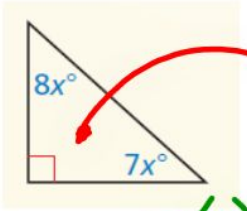


- [ ] x and y
- [ ] x and z
- [ ] y and z
- [ ] none

Triangles from Ch 5

Exercise 4

Find the measure of each acute angle.



8(6)

7(6)

Angles Triangle

$180 = 90 + 8x + 7x$

-90

$90 = 8x + 7x =$

$90 = 15x$

$90/15 = x = x = 6$

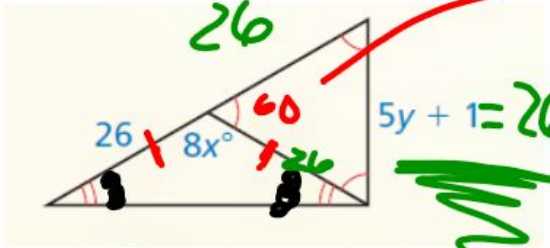
The measure of the top-left angle in the triangle is ☐° and the measure of the bottom-right angle is ☐°.

Exercise 6

In the diagram, $GHJK \cong LMNP$. Identify all pairs of congruent corresponding parts. Then write another congruence statement for the polygons.

Triangles from Ch 5

Find the values of x and y in the diagram.



equi angular

angle = 60

180 sum on a line

60

8x = 120

Isosceles

$x =$ 1 15 ✓

$y =$ 2 5 ✓

5y + 1 = 26

5y = 25

y = 5