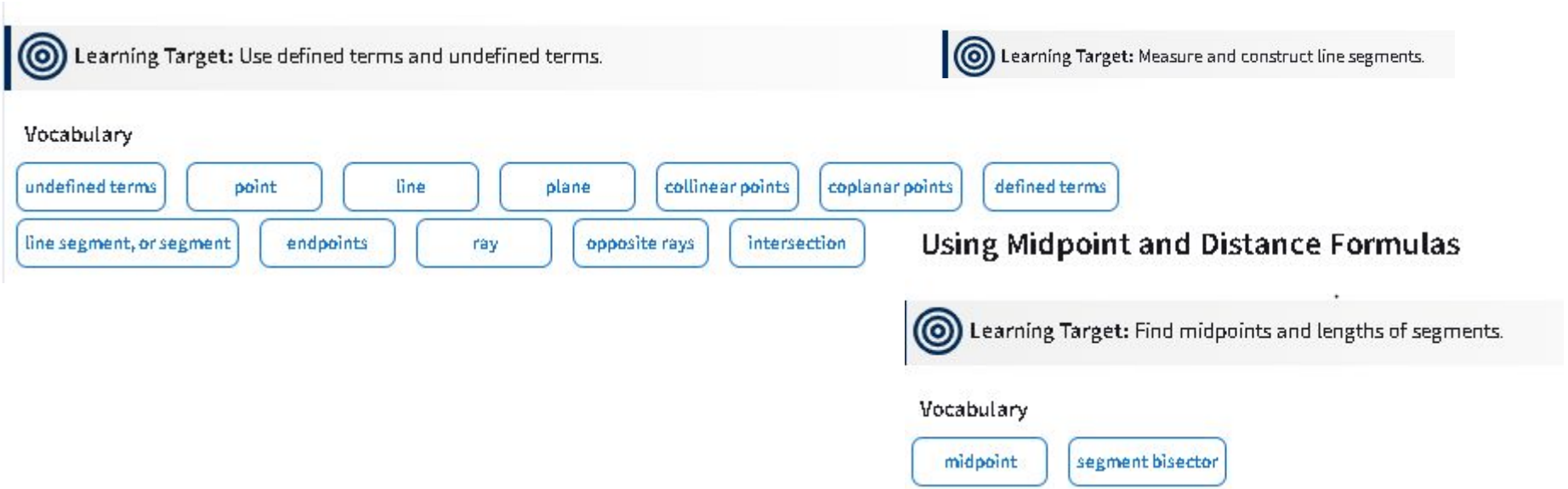
Chapter 1 - Sections 4-6

Geometry (PD 1,4)
2024

Sections 1-3 learning targets for quiz



Anchor Descriptor - G.2.1.2 Solve problems using analytic geometry.

Eligible Content - G.2.1.2.1 Calculate the distance and/or midpoint between 2 points on a number line or on a coordinate plane.

Week Sept 16-20, 2024 Overview

Monday	- **Quiz** on Section 1-3 THEN practice perimeter and area
Tuesday	- NOTES (1.5) Angles and angle addition problems
Wednesday	- NOTES with more terms with Angles (1.6)
Thursday	- PRACTICE with angle terms and addition problems --- on paper
Friday	- More practice --- online dynamic class

Sections 4-6 of Chapter 1 for Week -- Objectives/learning targets

1.4 Perimeter and Area in the Coordinate Plane	Find perimeters and areas of polygons in the coordinate plane.	• I can classify and describe polygons. • I can find perimeters of polygons in the coordinate plane. • I can find areas of polygons in the coordinate plane.
1.5 Measuring and Constructing Angles	Measure, construct, and describe angles.	• I can measure and classify angles. • I can construct congruent angles. • I can find angle measures. • I can construct an angle bisector.
1.6 Describing Pairs of Angles	Identify and use pairs of angles.	• I can identify complementary and supplementary angles. • I can identify linear pairs and vertical angles. • I can find angle measures in pairs of angles.

Geometry Standard ID:

Anchor Descriptor - G.1.2.1 Recognize and/or apply properties of angles, polygons and polyhedra.

MONDAY - section 1.4 perimeter and area

QUIZ after notes checked together to form a packet to use on quiz if period 1 or 4

QUIZ

THEN students work on problems from

handout EXTRA PRACTICE 1.4

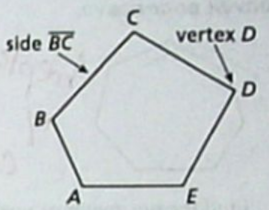
Black practice book pg. 7 Extra Practice - finish for homework.

1.4 Reteach

Key Idea

Polygons

In geometry, a figure that lies in a plane is called a plane figure. Recall that a *polygon* is a closed plane figure formed by three or more line segments called *sides*. Each side intersects exactly two sides, one at each *vertex*, so that no two sides with a common vertex are collinear.



polygon *ABCDE*

The number of sides determines the type of polygon, as shown in the table. You can also name a polygon using the term *n*-gon, where *n* is the number of sides. For instance, a 14-gon is a polygon with 14 sides.

Number of sides	Type of polygon
3	Triangle
4	Quadrilateral
5	Pentagon
6	Hexagon
7	Heptagon
8	Octagon
9	Nonagon
10	Decagon
12	Dodecagon
n	*n*-gon

A polygon is *convex* when no line that contains a side of the polygon contains a point in the interior of the polygon. A polygon that is not convex is *concave*.

EXAMPLE Classifying Polygons

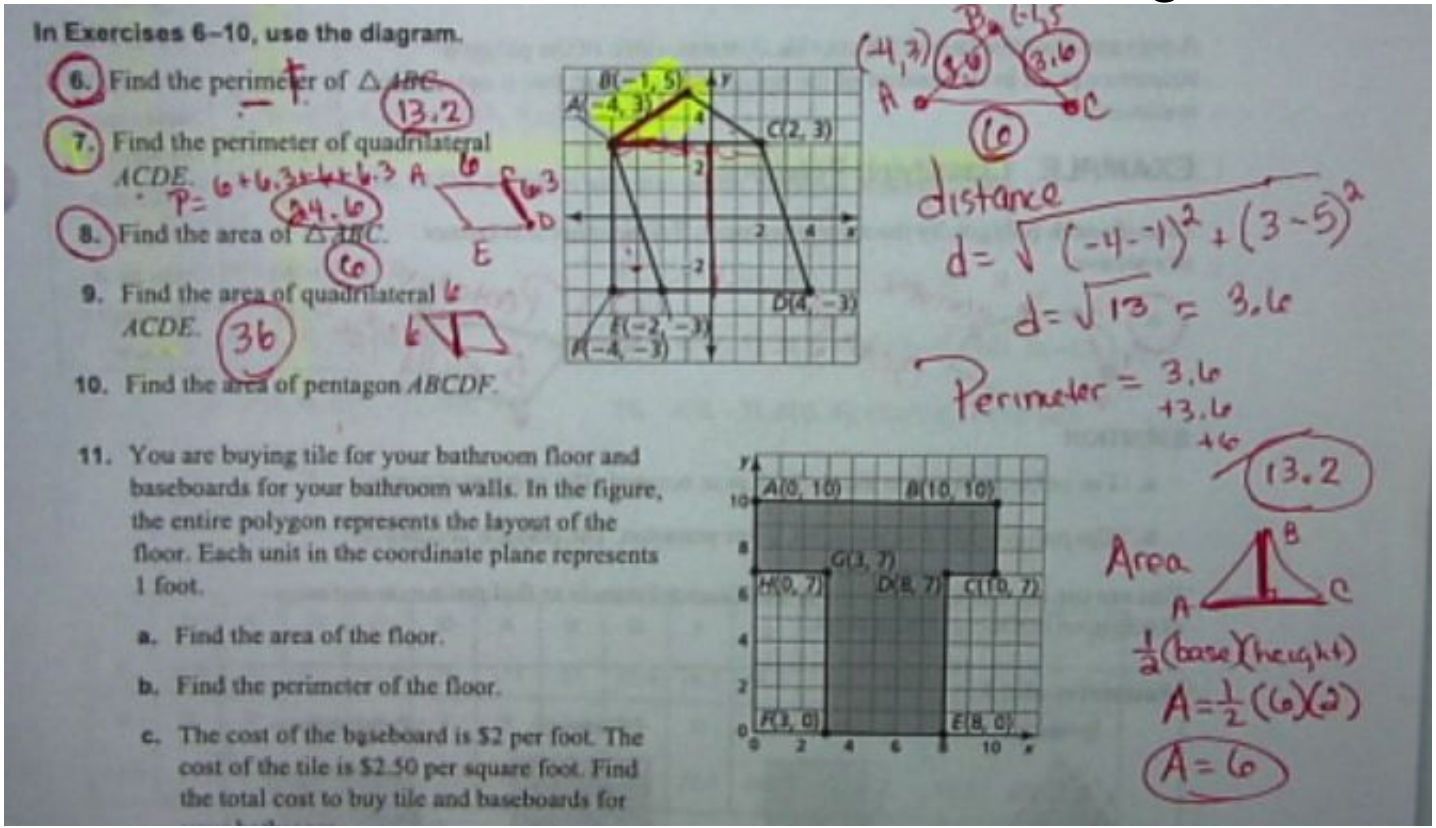
Classify each polygon by the number of sides. Tell whether it is *convex* or *concave*.

a. convex Octagon

b. Pentagon concave

Terms to know

Use DISTANCE formula for slant lengths from points



In Exercises 6–10, use the diagram.

6. Find the perimeter of $\triangle ABC$.

7. Find the perimeter of quadrilateral $ACDE$.

8. Find the area of $\triangle ABC$.

9. Find the area of quadrilateral $ACDE$.

10. Find the area of pentagon $ABCDF$.

11. You are buying tile for your bathroom floor and baseboards for your bathroom walls. In the figure, the entire polygon represents the layout of the floor. Each unit in the coordinate plane represents 1 foot.

   a. Find the area of the floor.

   b. Find the perimeter of the floor.

   c. The cost of the baseboard is $2 per foot. The cost of the tile is $2.50 per square foot. Find the total cost to buy tile and baseboards for

Perimeter means add lengths around it.

Area means covering so use formulas for “square” coverage

Tuesday - Section 5 Chapter 1 on Angle Addition

Use pg 8 of the Black Practice Book to guide examples as take notes.

The angle is NAMED by the direction of three points and vertex in middle.

The angles have classifications: acute, right, obtuse, and straight.

Angles, like segments, can be added by the common ray side and vertex.

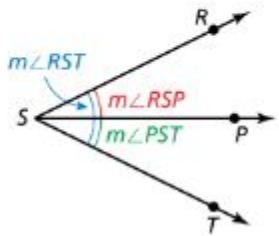
Postulate

1.4 Angle Addition Postulate

Words If P is in the interior of $\angle RST$, then the measure of $\angle RST$ is equal to the sum of the measures of $\angle RSP$ and $\angle PST$.

Symbols If P is in the interior of $\angle RST$, then

$m\angle RST = m\angle RSP + m\angle PST$.



Wednesday - section 6 from chapter 5 on additional terms

Angle PAIRS have relationships based on the term

- Adjacent angles
- Linear Pair ***special term for adjacent supplementary angles
- Supplementary angles
- Complementary angles
- Vertical angles **** show how they are congruent and will be the main used on later in proofs.

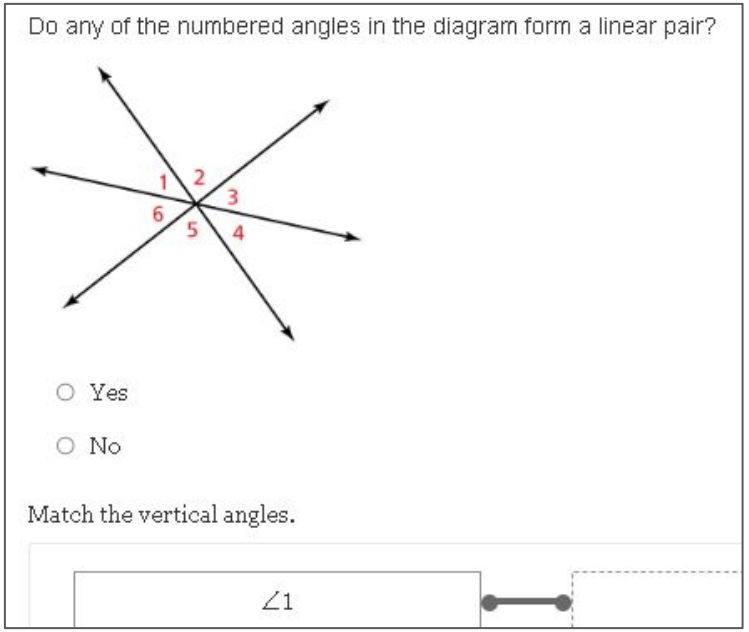
Use Black practice book pg 9 for examples as well as handouts.

Thursday & Friday - Practice Days with angle problems

Worksheet packet for sections 1-5 and 1-6 to complete with work paper for equation solving.

Thursday night - finish any classwork for homework

Friday - Review the worksheets and check using dynamic classroom assigned problems such as



NEXT week - chapter 1 test on TUESDAY 9/24