Lesson 8.7 – Area and Perimeter + More Distance Formula

Note: when writing you can write instead.

You can use the formulas given below and the Distance Formula to find the perimeters and areas of polygons in the coordinate plane.

Perimeter and Area

Perimeter of Triangle

Area of Triangle

Perimeter of a Square

Area of a Square

Perimeter of a Rectangle

Area of a Rectangle

REMINDER: Perimeter has linear units such as feet or meters.

Area has square units such as square feet or square meters.

Example 1: Find the area and perimeter of rectangle

Area:

Perimeter: units

Example 2: Find the perimeter and area of with vertices

Area:

Perimeter: units

Example 3: Find the area and perimeter of rectangle

A:

P: units

Example 4: Graph each set of lines to form a triangle. Find the area and perimeter.

Area:

Perimeter: units

Finding areas of composite figures

A composite figure is made up of simple shapes, such as triangles and rectangles. To find the area of a composite figure, find the areas of the simple shapes, and then use the Area Addition Postulate.

Area Addition Postulate: The area of a region is equal to the sum of the areas of its nonoverlapping parts

Example 5: Find the area of the polygon by addition

How could you use subtraction to find the area of a figure on the coordinate plane?

Draw a rectangle around the figure

Subtract areas of the triangles (corners) from area of rectangle.

Example 6: Find the area of the polygon by subtraction

Example 7: Find the area of the figure using any method.

Example 8: Find the area of the shaded region

Example 9: Find the area of the shaded region

Distance Review: Find the length of each line segment (the distance between each pair of points).

1)

2)

3)

4)

5)

6)

7)

8)