

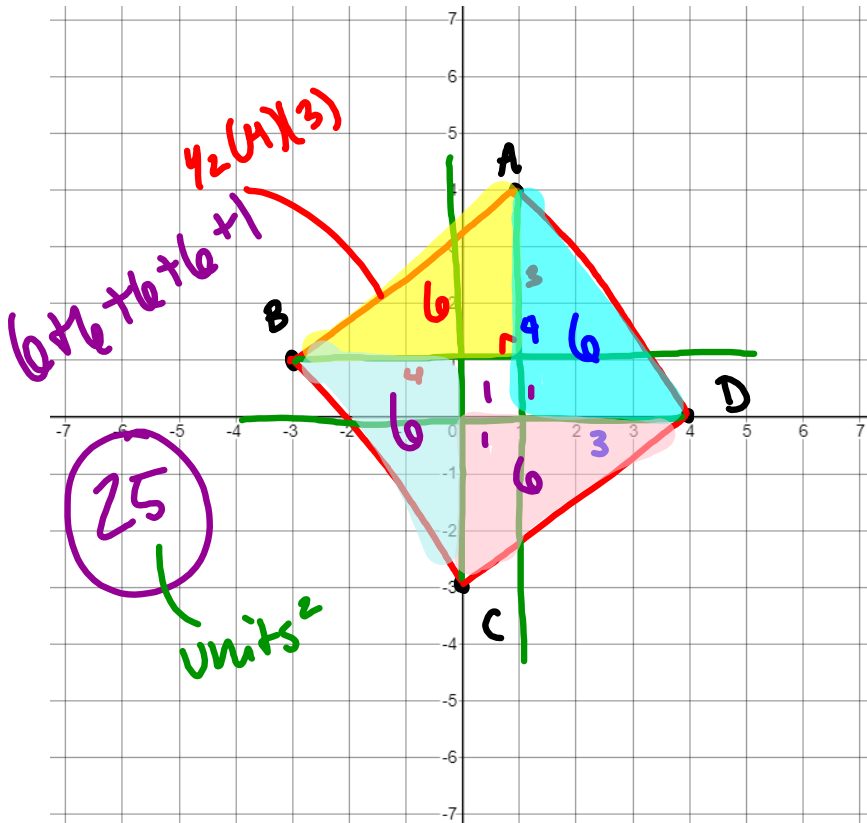
Geometry - 1.4 Perimeter and Area

- Terms:
 - > Polygon
 - > Convex
 - > Concave
 - > Types of Polygons
- Classify polygons as Concave or Convex
- Find the areas of polygons
- Find the perimeter of polygons

Exploring Area:

Use the points below to construct a quadrilateral, then find its area.

A(1, 4) B(-3, 1) C(0, -3) D(4, 0)



Area of Triangle: $A = \frac{1}{2} * \text{Base} * \text{Height}$

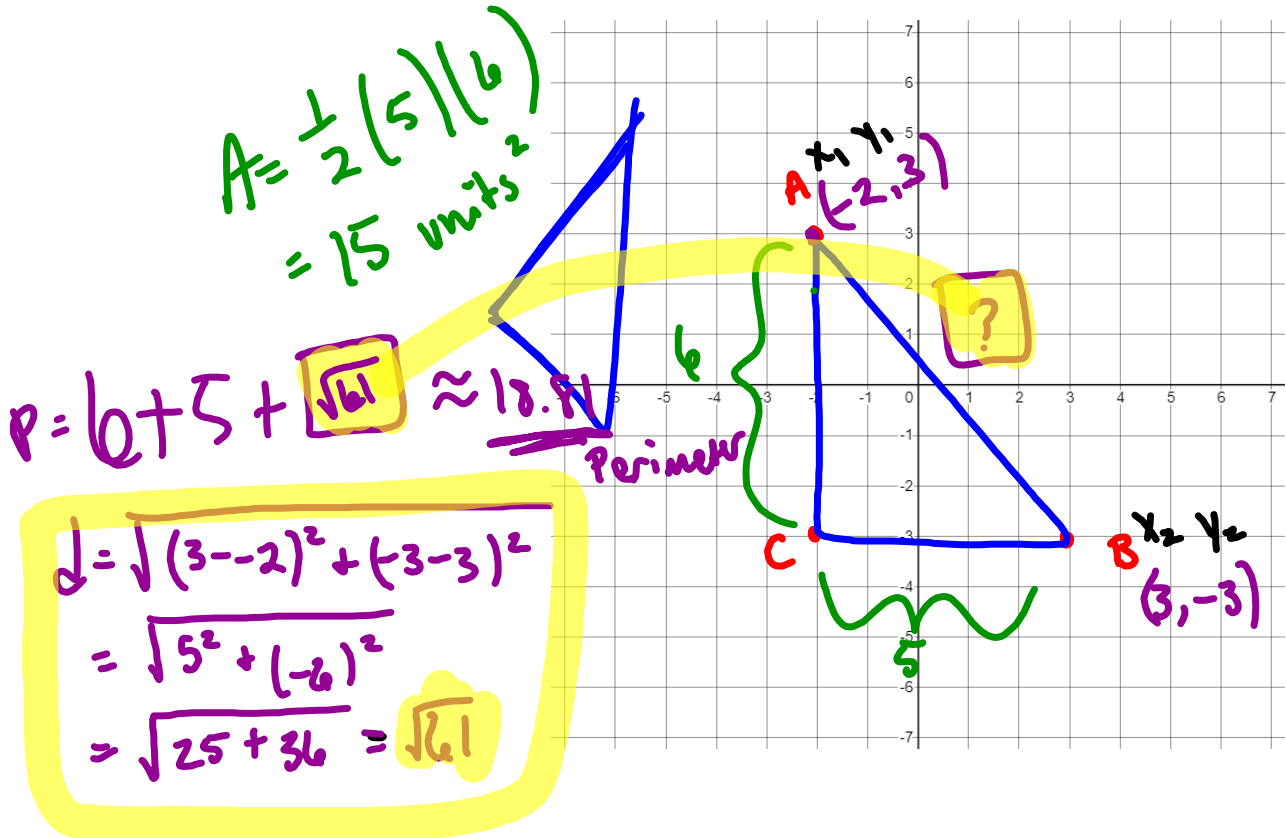
Area of Rectangle: $A = \text{Length} * \text{Width}$

When finding areas of unfamiliar shapes, breaking the shapes down into familiar shapes is a fantastic strategy.

Area is always represented in SQUARE UNITS. This is because the space covers two dimensions, Length and Width.

Refer to your vocab sheets for definitions.

Ex: Draw a triangle using the points given as vertices. Find its area. A(-2, 3) B(3, -3) C(-2, -3)



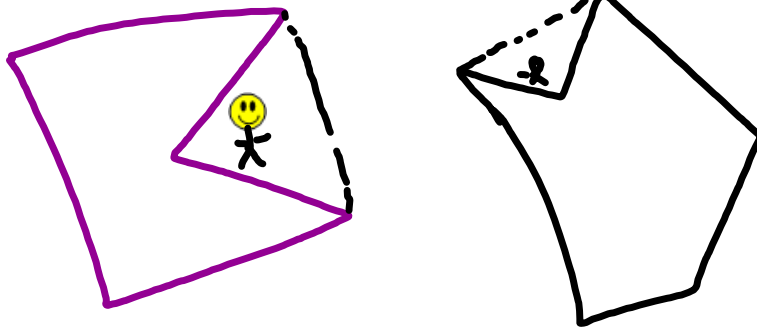
Vertices are just the corners of a polygon.

How could I find the length of a side if it was a diagonal line on the coordinate plane, instead of horizontal/vertical? *Distance formula*

- Find the Perimeter of the triangle above. ✂

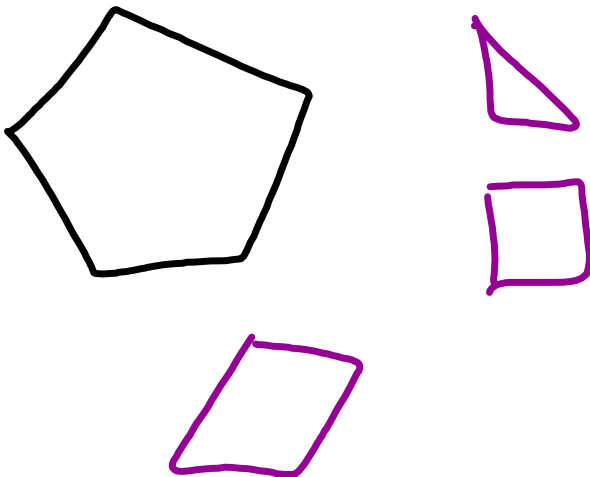
Concave/Convex:

Examples of **Concave** polygons:



Little **caves** to hide in.

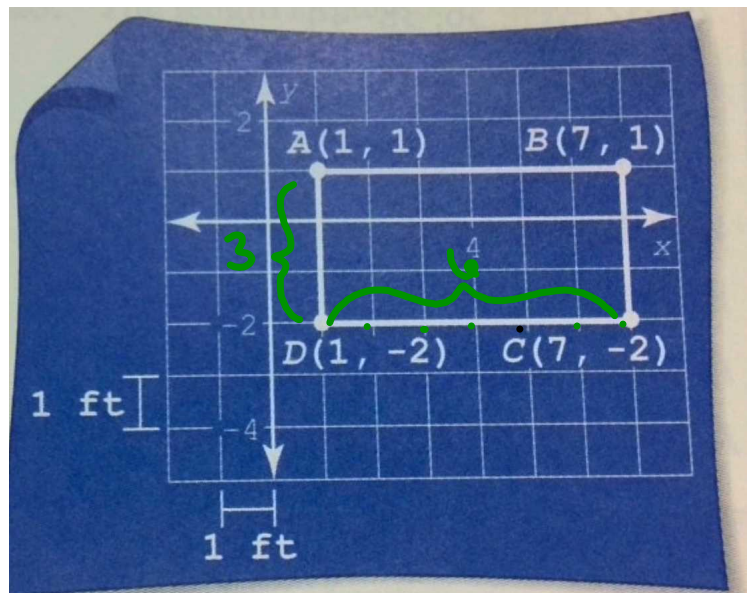
Examples of **Convex** polygons:



No little caves to hide in.

You are constructing a wooden window cover for a shed following the schematics below. How many square feet of wood are needed to make the cover?

length \cdot width
 $6 \cdot 3 = 18$ square feet
or ft^2



What is the problem asking for, and why?

Find Area
"square feet"

Solving the Problem: 18 ft^2

Homework:

Pages 32-34

Numbers: 3-7, 12-14, 25

Attachments

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