

**AGENDA** →

THUR  
2/6

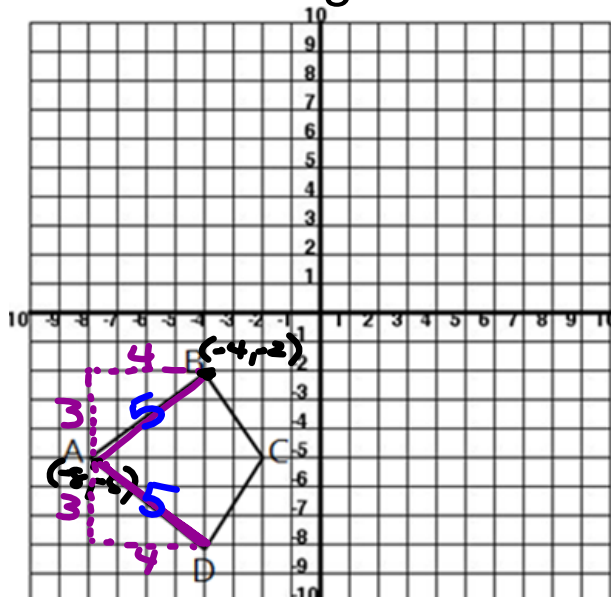
**REMINDERS**  
ALL electronics  
should be put  
away in your  
**BAG!**  
> Unit 2A Quiz 1  
**TOMORROW**

**TO-DO**

- 1) Warm-Up
- 2) Notes
- 3) Practice, S.C.

Jul 31-9:37 PM

1. Find the length of AB and AD



$$AB = \sqrt{(3)^2 + (4)^2}$$

$$= \sqrt{25}$$

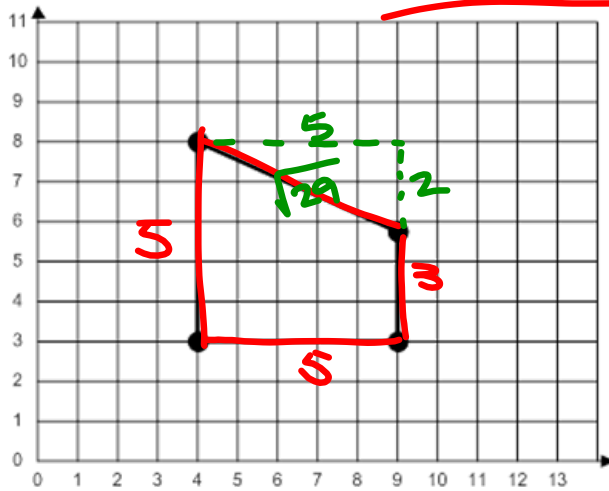
$$AB = \underline{5}$$

$$AD = \sqrt{(3)^2 + (4)^2}$$

$$= \sqrt{25} = 5$$

$$AD = \underline{5}$$

2. Calculate the perimeter of the figure below.



$$d = \sqrt{(5)^2 + (2)^2}$$

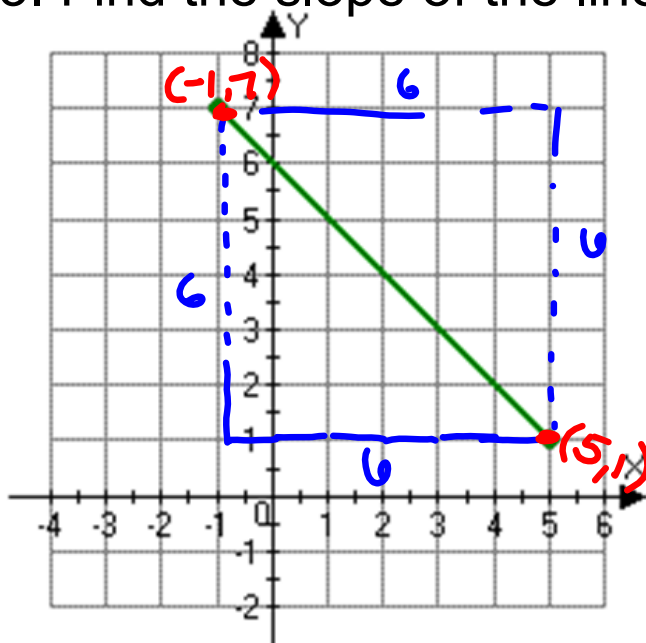
$$d = \sqrt{29}$$

$$P = 5 + 5 + 3 + \sqrt{29}$$

$$P = 13 + \sqrt{29}$$

$$P = 18.38$$

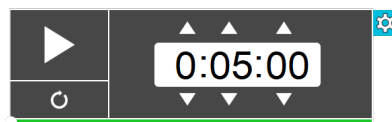
3. Find the slope of the line



$$m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{-6}{6} = -1$$

$$m = \frac{7-1}{-1-5} = \frac{6}{-6} = -1$$



# HW Answers

**What am I learning today?**

**Learning Objective 2A.4**

How to prove all types of triangles on the coordinate plane

## What will I do to show that I have learned it?

I can...

Use slope and distance formulas to prove congruent and perpendicular sides.

Jul 31-6:18 PM

### Characteristics of ALL Types of Triangles:

- Scalene - ALL sides are different
  - Isosceles - 2 congruent sides
  - Equilateral - 3 congruent sides
  - Right - Has a right angle (90°)
- } Distan.

**Proving Congruent Sides** - Find the DISTANCE/LENGTH

**Proving Right Angle** - Find slopes that are OPPOSITE RECIPROCALLS (flipped and opposite signs)

Perpendicular

Example:  $\frac{2}{1} \rightarrow \frac{-1}{2}$

$$-\frac{3}{4} \rightarrow \frac{4}{3}$$

Jan 29-3:44 PM

Quick ExampleSlope

$$m = \frac{y_2 - y_1}{x_2 - x_1} \left( \frac{\text{rise}}{\text{run}} \right)$$

$$\frac{2}{6} = \frac{1}{3}$$

$$\frac{6-4}{9-3} = \frac{2}{6} = \frac{1}{3}$$

Distance

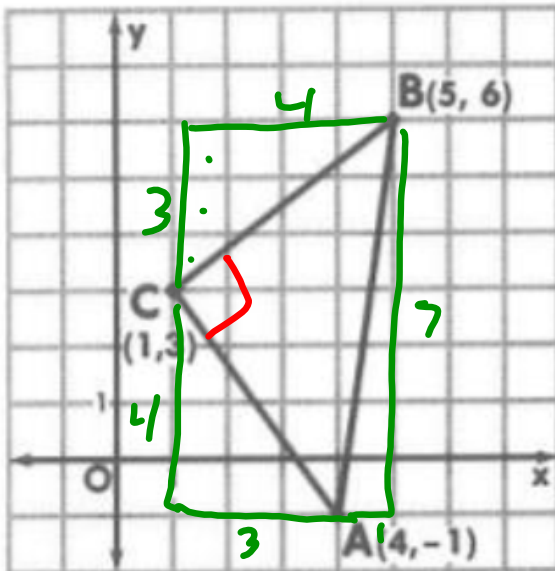
$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$\sqrt{2^2 + 6^2} = c^2$$

$$\sqrt{4 + 36} = \sqrt{40}$$

$$= 2\sqrt{10}$$

1. Prove that  $\triangle ABC$  is a right triangle



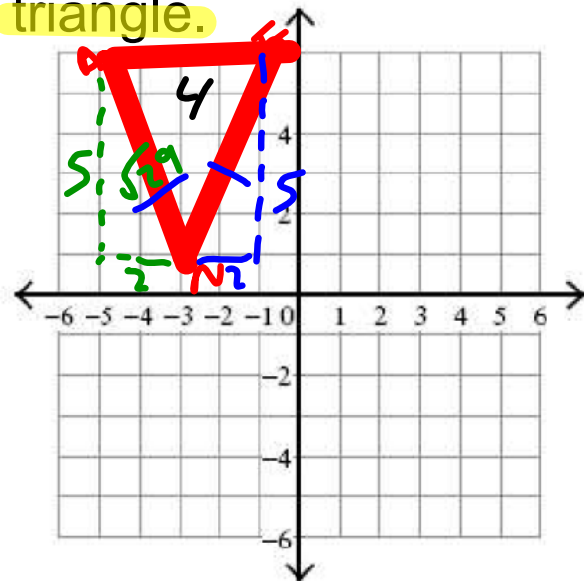
$$BA = \frac{7}{1} = 7$$

$$BC = \frac{3}{4}$$

$$CA = \frac{-4}{3}$$

$$BC \perp CA$$

2. Triangle AFN has vertices A(-5, 6), F(-1, 6), and N(-3, 1). Prove triangle AFN is an **isosceles triangle**.



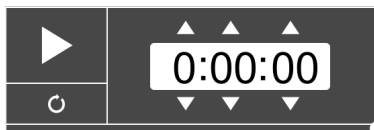
$$AN: \sqrt{(5)^2 + (2)^2} \\ = \sqrt{25+4} = \sqrt{29}$$

$$FN: \sqrt{29}$$

$$AN \cong FN \\ \sqrt{29} = \sqrt{29}$$

Jan 29-3:47 PM

**Classwork:**



Actively  
working

Complete the classwork by proving different types of triangles

**HW:** Complete the classwork

Jul 31-9:12 PM

## Skills Check

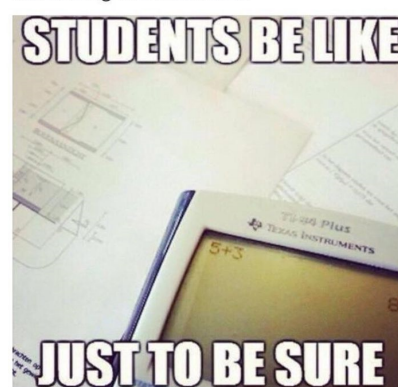


1. There is **NO communication/eye contact** during a quiz to anyone!

2. When you are **DONE**, **turn into the bin.**

3. Finish your classwork/HW

me during the math test



Aug 6-6:36 PM