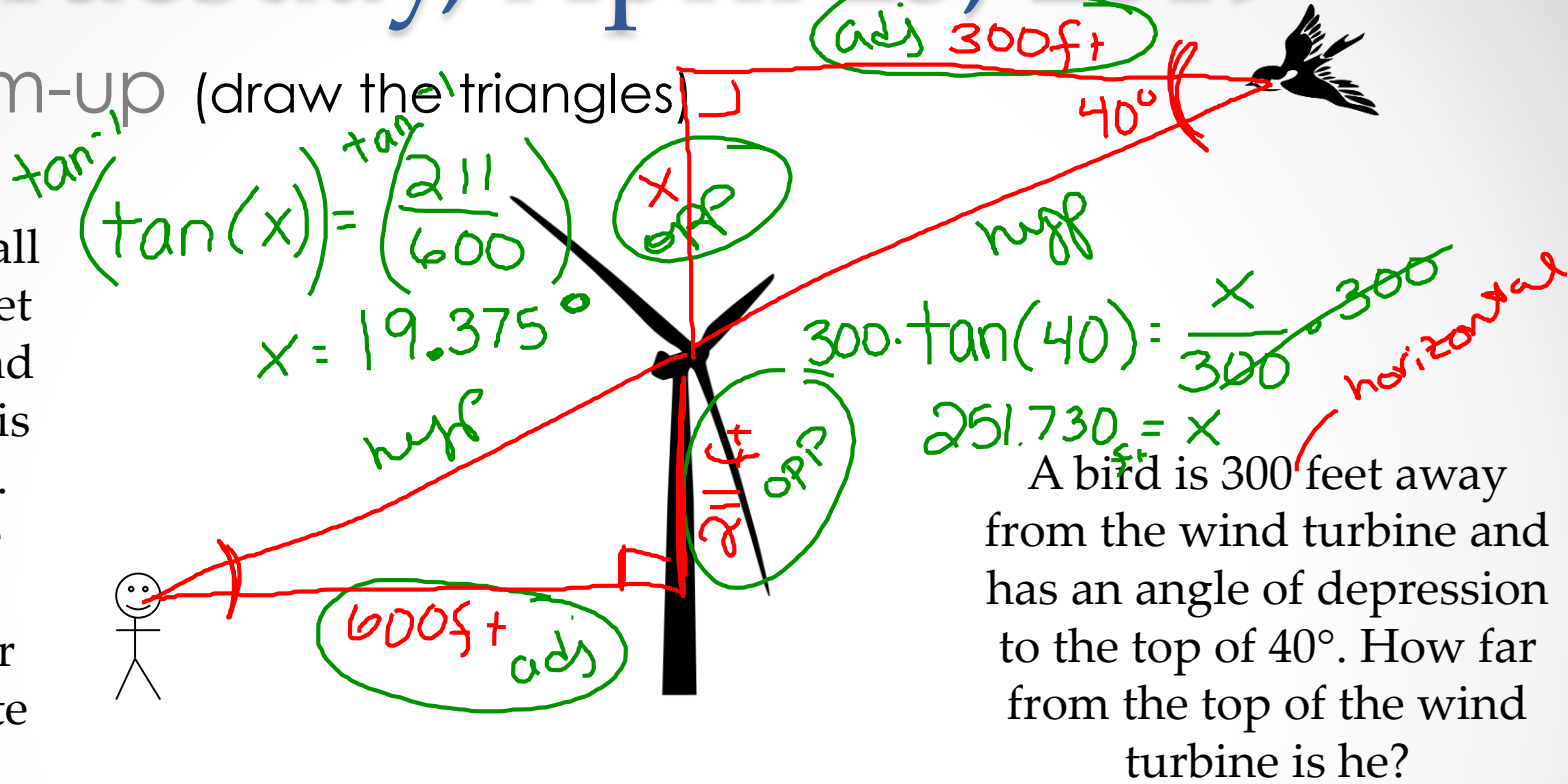# Tuesday, April 23, 2019

- Warm-up (draw the triangles)

Jared is 4 ft tall and is 600 feet from the wind turbine that is 215 feet tall. What is the angle of elevation for his line of site to the top?

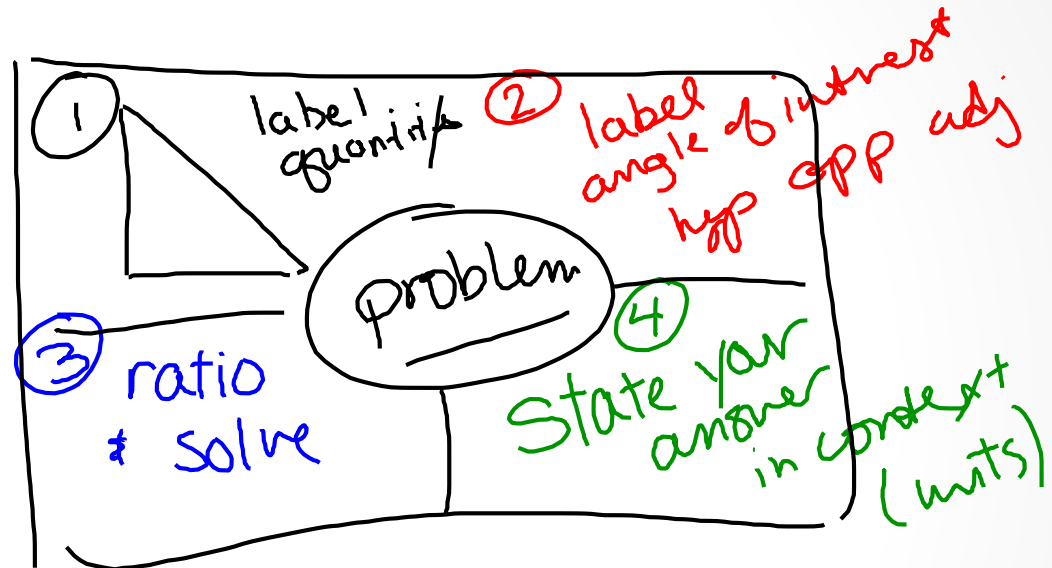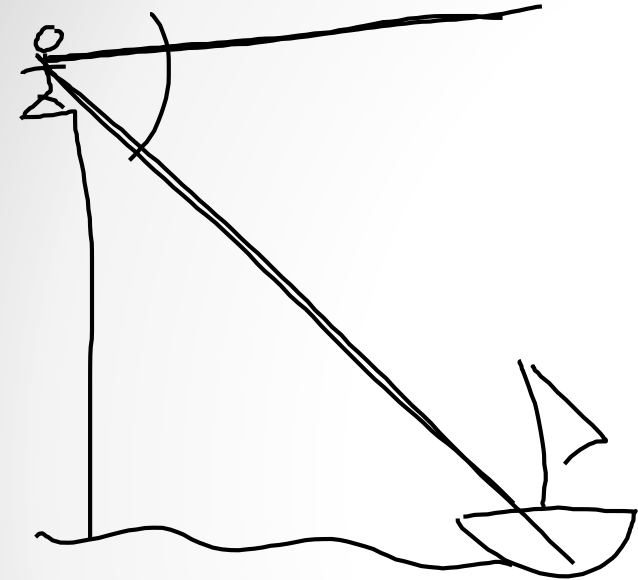$$\tan^{-1}\left(\tan(x)\right) = \tan^{-1}\left(\frac{211}{600}\right)$$

$$x = 19.375°$$

adj 300ft

40°

x opp

hyp

$$300 \cdot \tan(40) = \frac{x}{300} \cdot 300$$

$$251.730 = x \text{ ft}$$

horizontal

hyp

211 ft opp

600ft adj

A bird is 300 feet away from the wind turbine and has an angle of depression to the top of 40°. How far from the top of the wind turbine is he?

- Word Problems

Objectives
Content: I will <u>apply</u> **trigonometric ratios** to solving problems.
Social: I will <u>work</u> with another person to **interpret** a problem and work through to the solution.
Language: I will <u>read</u> questions carefully, using **hypotenuse**, **opposite** and **adjacent** correctly to label and solve a triangle.
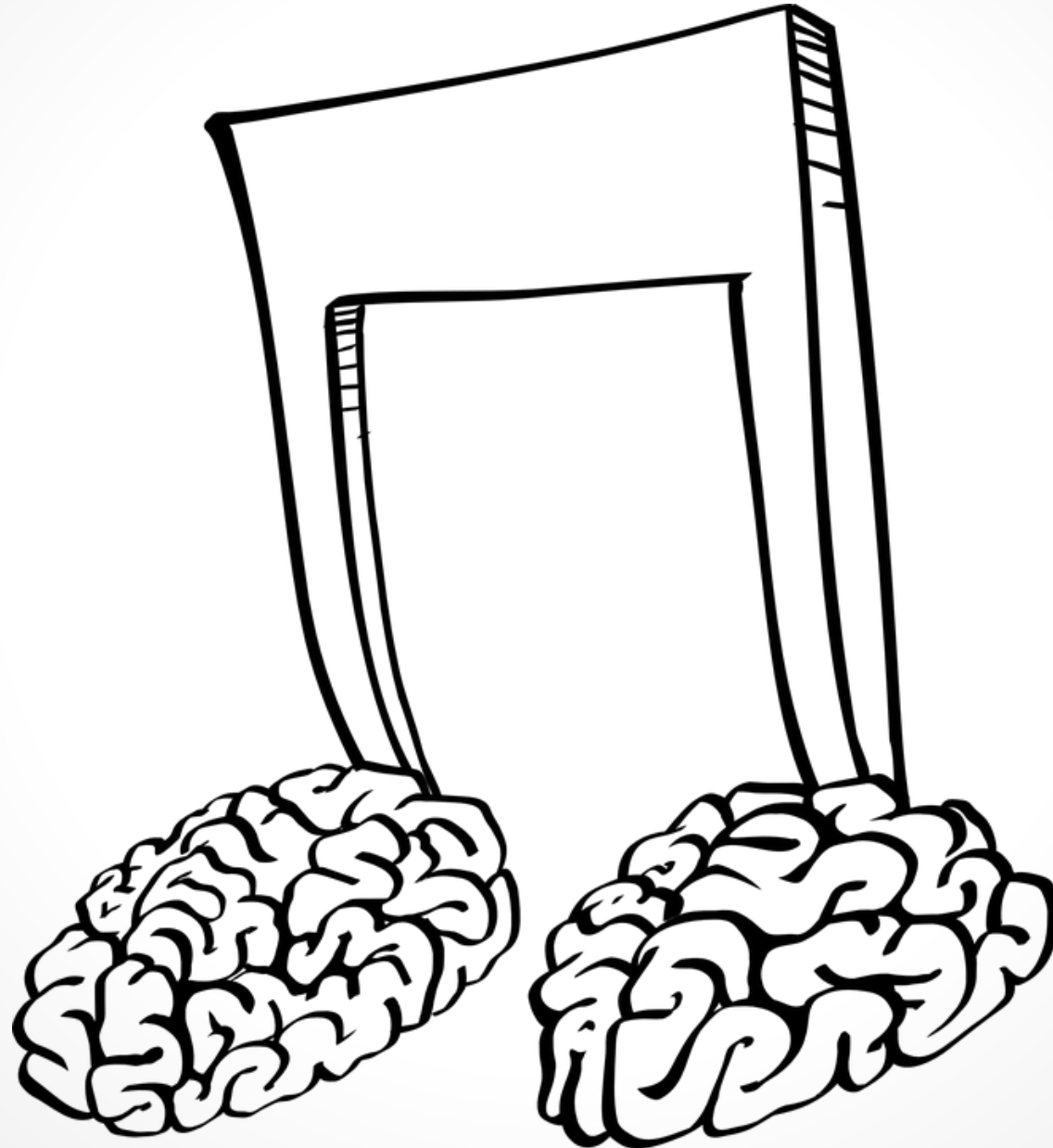
Word Problems in the Round

Handwritten diagram:
1. label quantities
2. label angle of interest, hyp opp adj
3. ratio & solve
4. State your answer in context (units)
Problem

Objectives
Content: I will <u>apply</u> **trigonometric ratios** to solving problems.
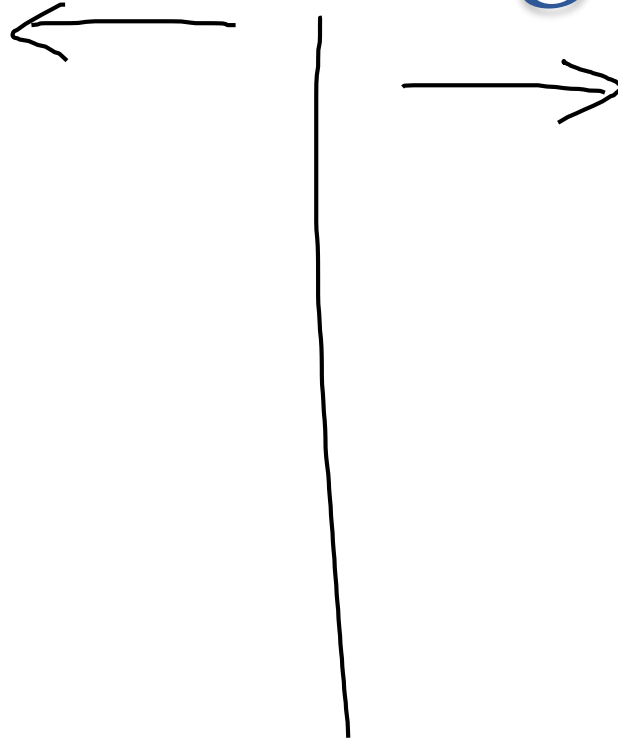**Social**: I will <u>work</u> with another person to **interpret** a problem and work through to the solution.
Language: I will <u>read</u> questions carefully, using **hypotenuse**, **opposite** and **adjacent** correctly to label and solve a triangle.

Brain Break

Word Problems in the Building

Objectives

Content: I will <u>apply</u> **trigonometric ratios** to solving problems.

Social: I will <u>work</u> with another person to **interpret** a problem and work through to the solution.

Language: I will <u>read</u> questions carefully, using **hypotenuse**, **opposite** and **adjacent** correctly to label and solve a triangle.