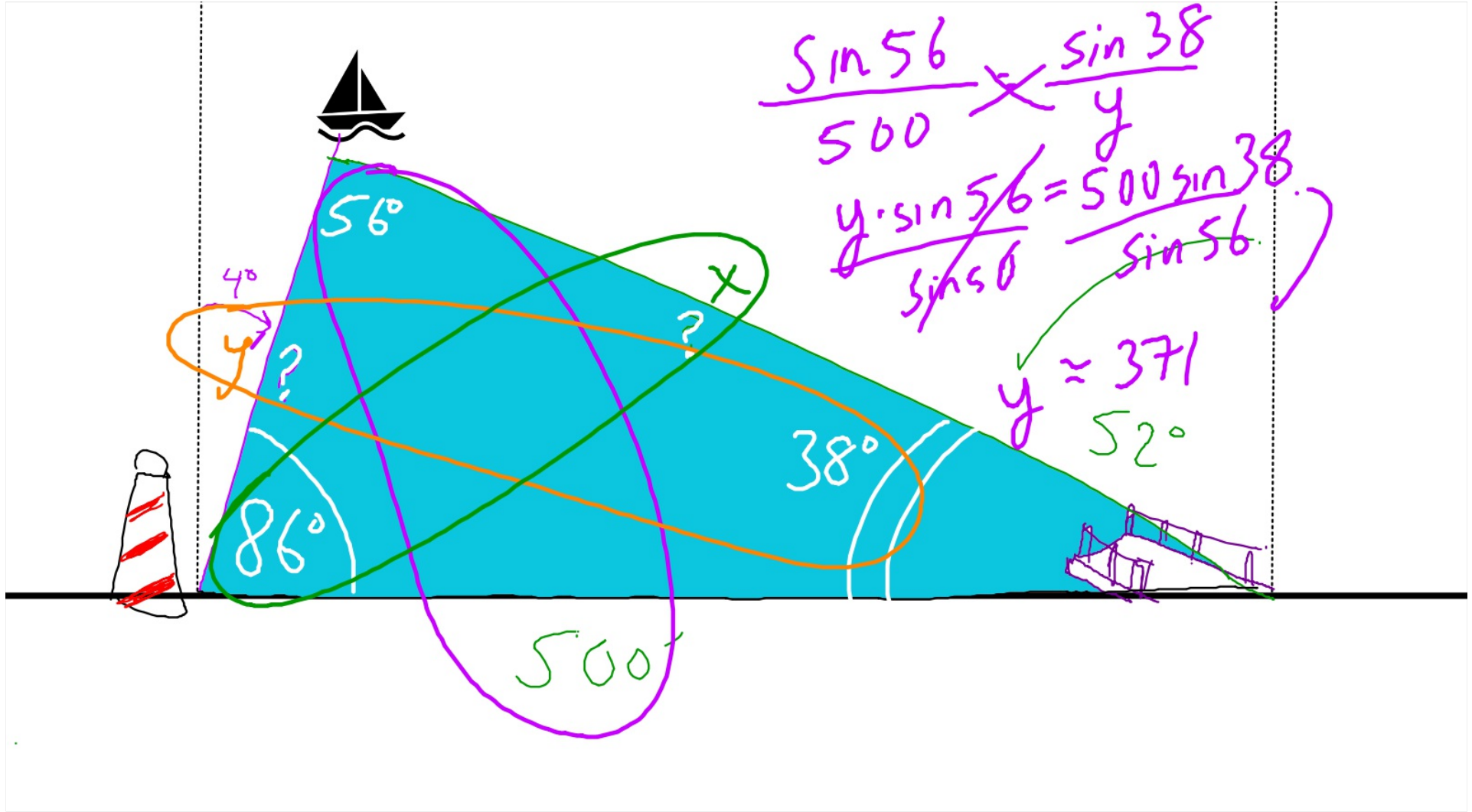


Applying Trigonometry

A ship is sailing parallel to a shoreline with two landmarks spaced 500 feet apart. From the left marker, the ship can be spotted 4° right of center (CW), and from the right marker the ship can be spotted 52° left of center (CCW). How far is the ship from each marker?
(to the nearest foot)



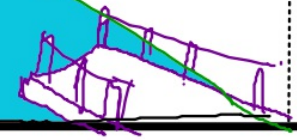


$$\frac{\sin 56}{500} \times \frac{\sin 38}{y}$$

$$\frac{y \cdot \sin 56}{\sin 38} = \frac{500 \sin 38}{\sin 56}$$

$$y \approx 371$$

52°



500

86°

38°

56°

40°

x

?

?

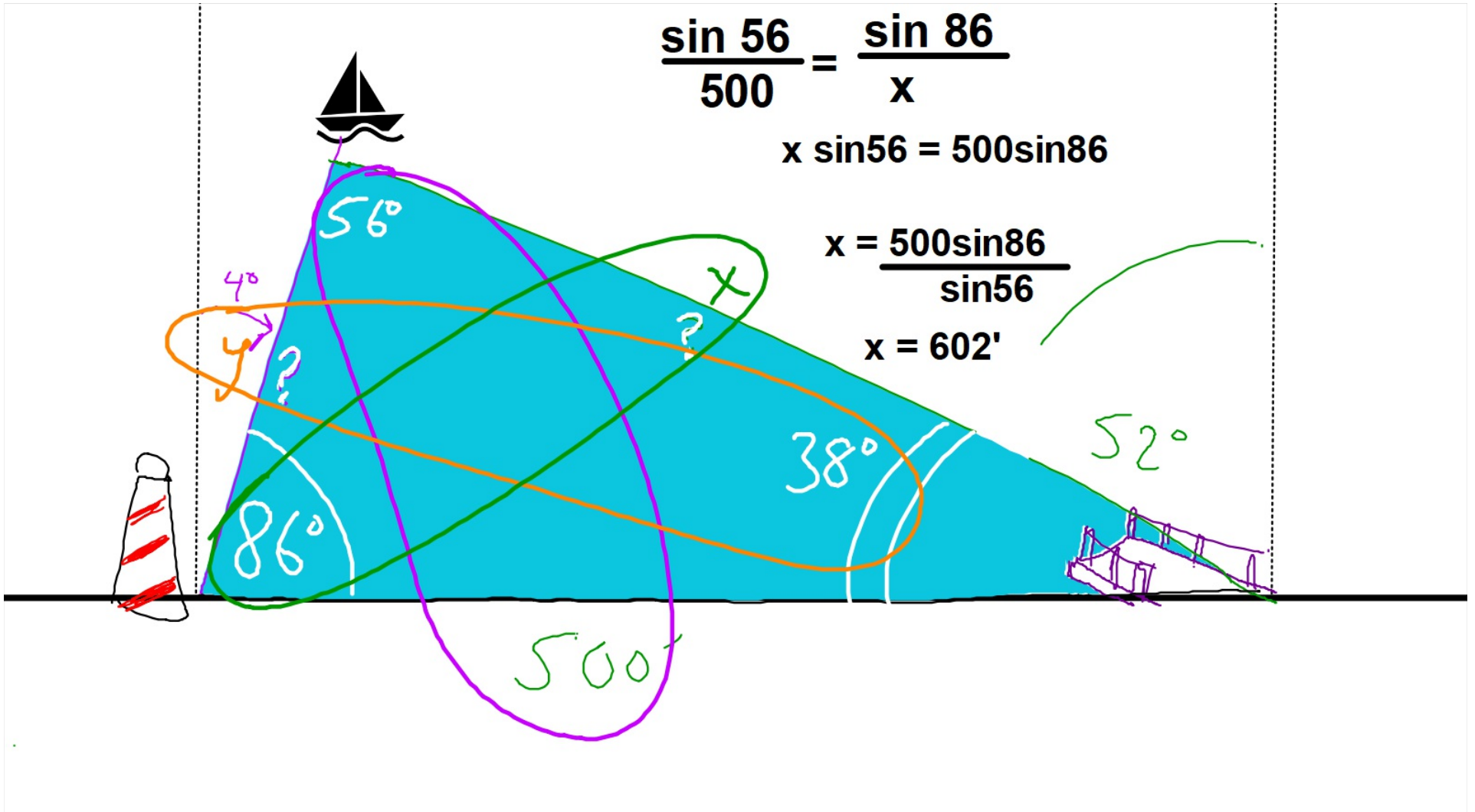
y

$$\frac{\sin 56}{500} = \frac{\sin 86}{x}$$

$$x \sin 56 = 500 \sin 86$$

$$x = \frac{500 \sin 86}{\sin 56}$$

$$x = 602'$$



Two airplanes depart an airport at noon, one flying 400mph and the other flying 350mph. The faster plane is flying a bearing of $N25^{\circ}W$, while the slower plane is flying $N80^{\circ}E$. At 2pm, how far apart are the planes?

(to the nearest mile)



HAHA



HAHAHA



HAHAHAHAHA

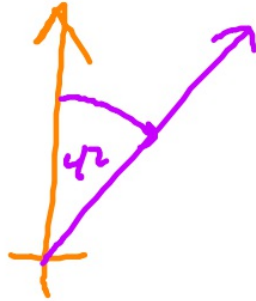


HAHAHAHAHA

How to read bearings:

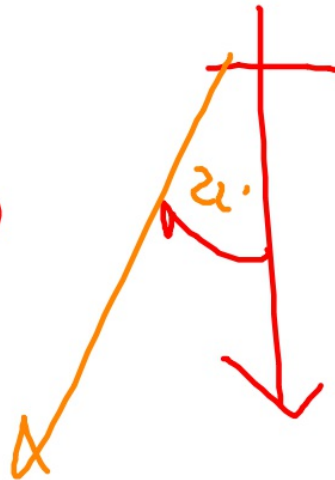
N##°E

ex/ N42°E



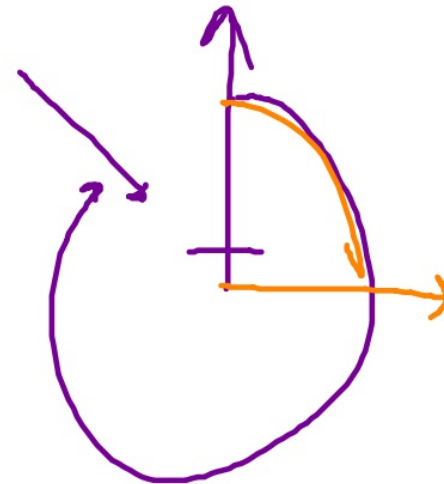
S##°W

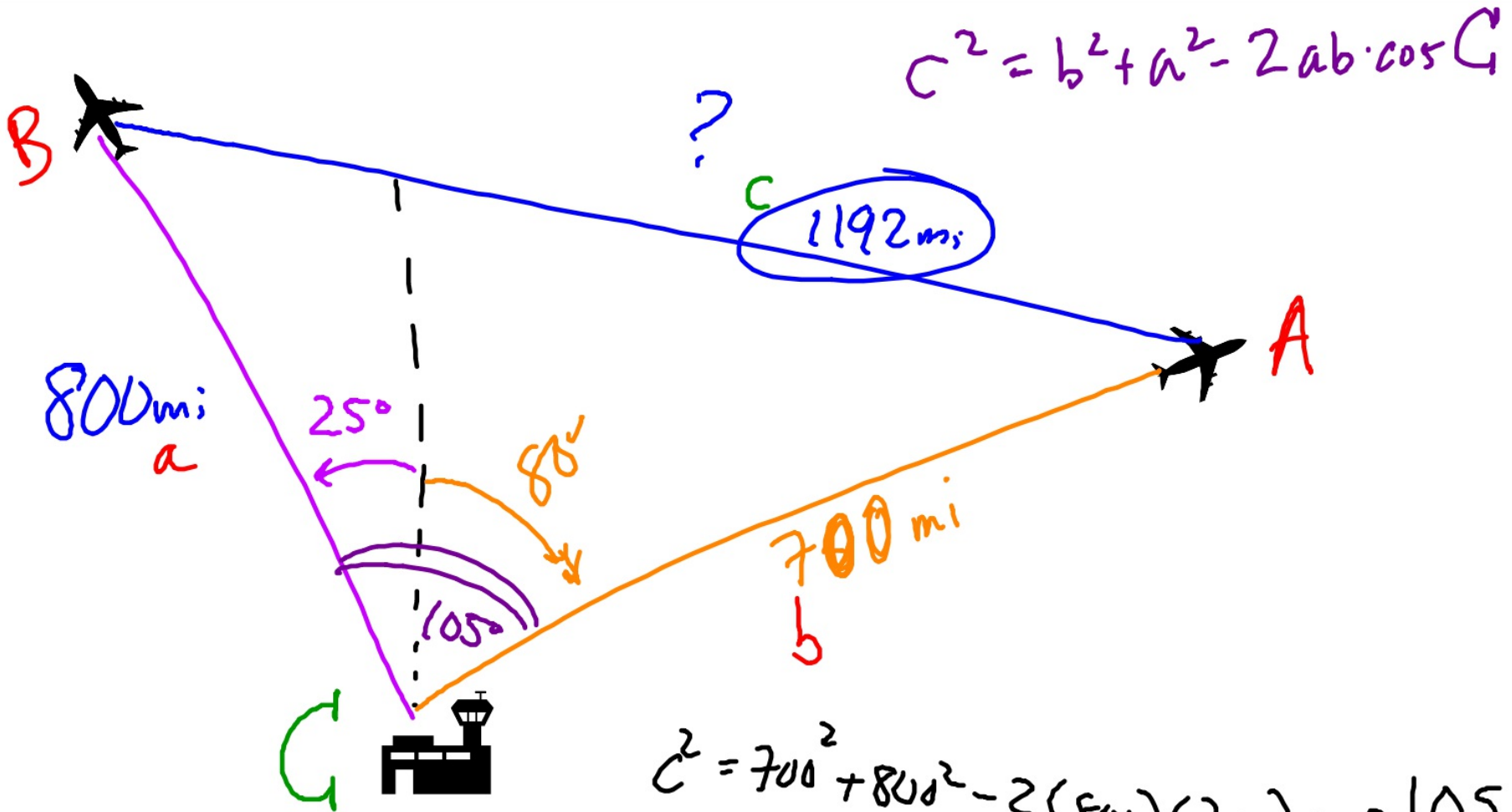
ex/ S22°W



Three digit bearings

assume 0° is true north
rotate CW





$$c^2 = 700^2 + 800^2 - 2(800)(700)\cos 105$$

$$c^2 = \sqrt{\quad}$$

Monday's assessment

New Skill

- SRT-C8b: Law of Sines/Cosines (like the hw, but finding specific measures, not 'everything')

Old Skills

- SRT-C8a: Applying trigonometry (word problem, real world context)
- SRT-C6a: Special Right Triangles (many need to study this!)
- SRT-C7a: Sin/Cos of Complementary Angles (see last test/practice)

Only one more in-class assessment after this one for Q3
Q3 grades are finalized at end of the day Thursday March 15

HW

finish practice assessment, then check solutions online

help videos for each problem type will be at mgeo.weebly.com

use them!