

Andrew Wang

### Pipes vs. Shared Memory

While pipe sends data/messages to a recipient, shared memory is a public publishing of data. A pipe is a one way method of sharing code. I would choose shared memory because AVBotz is composed of many group members and since pipe is limited to only one recipient at a time, shared memory would be the better choice for mass distribution.

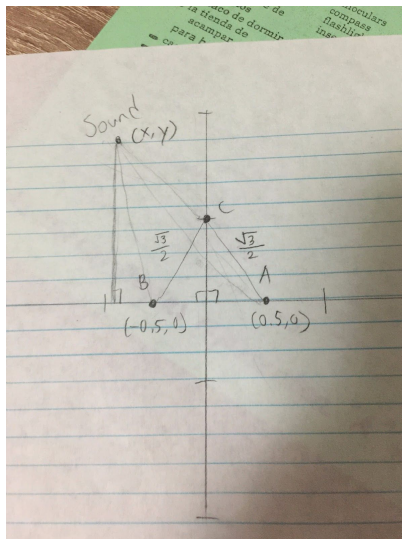
4) a) The sound is coming from North West.

b) Since C received the signal first, it must have been coming from the North direction. Then since B received the signal second, the sound must have been closer to B than A. B is on the left of A so that makes the sound coming from North West.

c) The possible points would make half of a hyperbola because for any point on the hyperbola, the distance between the sound and point C and the sound and point B would be the same, therefore keeping the distance difference the same too.

d) The sound originates from  $(-3.50348, 4.00356)$ .

e) I would look within a range of x and y values and find the coordinate that will satisfy the system of equations. (see my bonus for details)



Handwritten calculations on lined paper:

Distance difference from sound origin:

$C \& A: 0.000707023 \cdot 4461 = 1.047101063$

ind  $\& B$   $d = \sqrt{(x+0.5)^2 + (y)^2}$

ind  $\& C$   $d_2 = \sqrt{(x)^2 + (y-1)^2}$

ind  $\& A$   $d_3 = \sqrt{(x-0.5)^2 + (y)^2}$

$\begin{cases} d_2 + 0.390204994 = d_1 \\ d_3 + 1.047101063 = d_1 \end{cases}$

Sound:  $(-3.50348, 4.00356)$