- *Write down the variable names you want to use in the sketch along with their data types.*

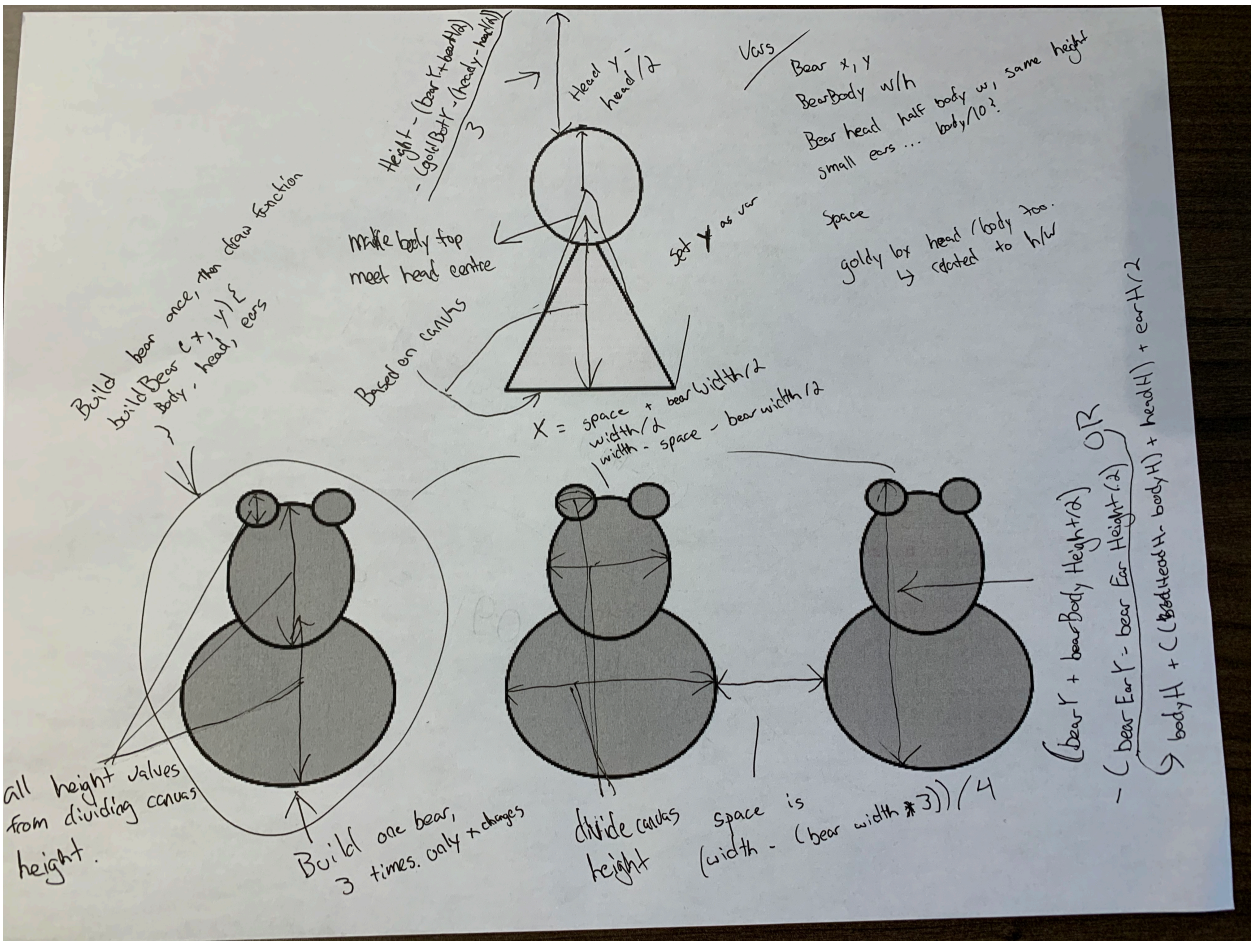
Will need to set some global variables to be used in multiple functions. These will most likely be sizing of the objects (bear / goldilocks) which will be set based on canvas height / width. Goldilocks will have 3 variables, body height, body width, and head diameter.

The bears will have width and height set for body head and ears. Width and height needed for all as they are ellipse not circles. This also makes active resizing a bit smoother, although it makes for odd shapes when using extreme ratios.

Spaces will be set as well, as they are going to be used for bears x/y, and goldilocks y value.

- *Draw a diagram showing how you plan to draw the bears and Goldilocks. Label the important sizes and distances in the diagram as reference, using variable names instead of hardcoded values where appropriate. (You can use a tool like [Google Drawings (Links to an external site.)] or upload a phone picture/scan of a drawing you make on paper.)*

Sorry my writing is hard to read.



- *Explain conceptually how you are going to space the bears evenly apart across the window, optionally using mathematical formulas in your explanation if you find it helpful.*

The spacing of the bears is done by first calculating how much left over space there is on the canvas after the bear's body width is calculated.

leftOverSpace = width - bearBodyWidth*3

There will be 4 spaces (between and sides of bears). The left over space divided by 4 will be how much space will evenly go between each bear.

xSpace = leftOverSpace/4

Once that space is calculated, you can find the left and right bears position relative to the canvas wall and bear's body width halved (so it's in the middle)

leftBearX = xSpace + bearBodyWidth/2
rightBearX = width - xSpace - bearBodyWidth/2

The middle is of course just width/2. If there were more than 3 bears, you would have to add spacing + bearBodyWidth for ever bear that preceded the bear being drawn.

- *Explain how you can use a function to effectively abstract the drawing of each bear.*

We only need to explain how to draw a bear once. This bear drawing function however will need input for location on the canvas. To do this we simply draw the bear 3 times using the same function, passing in the X values from the question above.

```
draw() {
  drawBear(leftBearX)
  drawBear(width/2)
  drawBear(rightBearX)
}
```