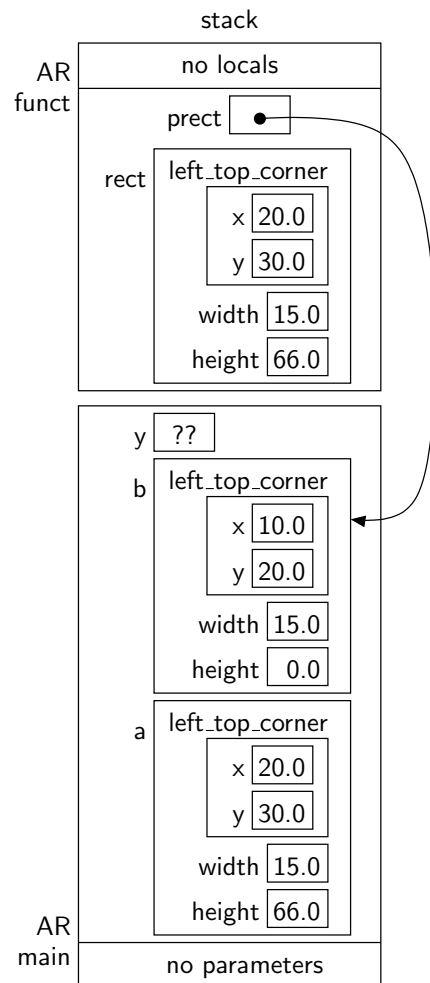# ENCM 339 Fall 2016 Midterm: Section 5 Solutions

Part a

b.height has a value of 0.0, not garbage, because if an initializer is given that doesn't provide enough values for all the members of a **struct** object, members without explicit initial values will get zero. (In other words, using {{10, 20}} to initialize b means the same as {{10, 20}, 0, 0}.)

Part b

```
double diagonal(const Rectangle *rect)
{
  double w = rect->width;
  double h = rect->height;
  return sqrt(w * w + h * h);
}
```

(If you know the width and height, there is no need to use the location of the top left corner to find the diagonal distance!)