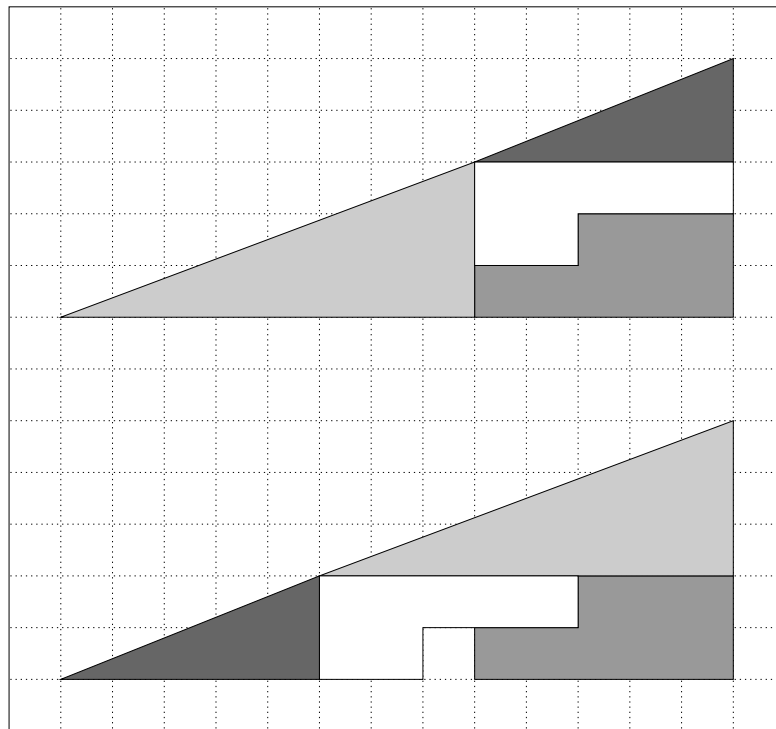(i) *This assignment is due back the first day of classes in the second part of the semester.*

(ii) *We have a test coming up in class on the 27th of August.*

1. Look at the following figures. The bottom figure contains the same pieces as the top one, but they have been rearranged.

(a) Explain where the extra square came from in the bottom figure.

(b) Which aspect of graphical perception is being used to fool you here?

2. Colour Swatches.

   (a) Produce a plot which consists of a square divided into 6 rows and
       6 columns. Across each row, vary the colour hue from 0 to 1 and
       down each column, vary the saturation from 0 to 1.

   (b) Produce a plot which consists of a square divided into 6 rows and
       6 columns. Across each row, vary the intensity (or value) of the
       colour from 0 to 1 and down each column, vary the saturation
       from 0 to 1.

   Hint: The R code here should consist of just a few lines of code. In
   particular, you can produce all the squares with just one call to `rect`.