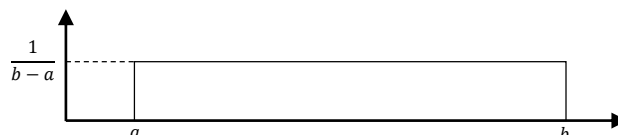


## Part 3: The Continuous Uniform Distribution

The uniform distribution is another continuous distribution, and is sometimes referred to as the rectangular distribution as it forms a rectangular shape when you draw it out. The probability density function (or pdf for short) is shown below, both as a formula and a diagram. The minimum is 'a' and the maximum is 'b'.

$$f(x) = \begin{cases} \frac{1}{b-a}, & a < x < b \\ 0, & \text{elsewhere} \end{cases}$$



Like with the normal distribution the area under the 'curve' is the probability, so the full rectangle will always have an area of one, as probabilities always add to one. We normally use the uniform distribution when we are only given two pieces of information, the minimum and the maximum.