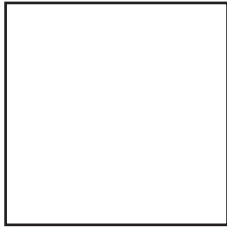
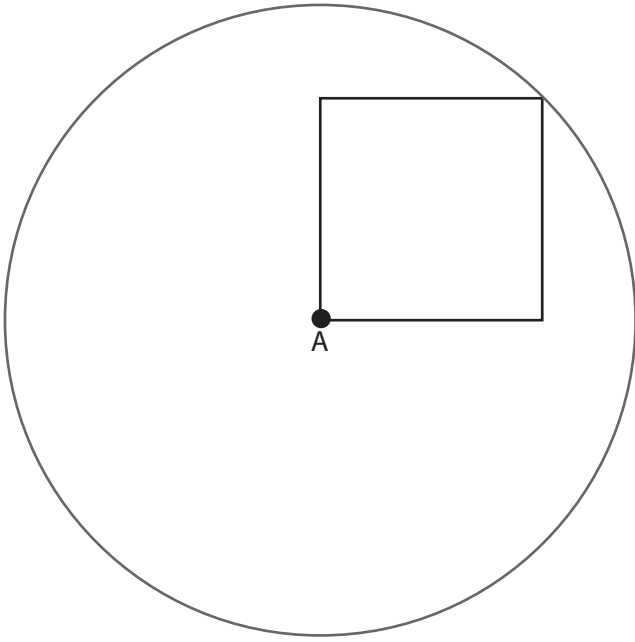


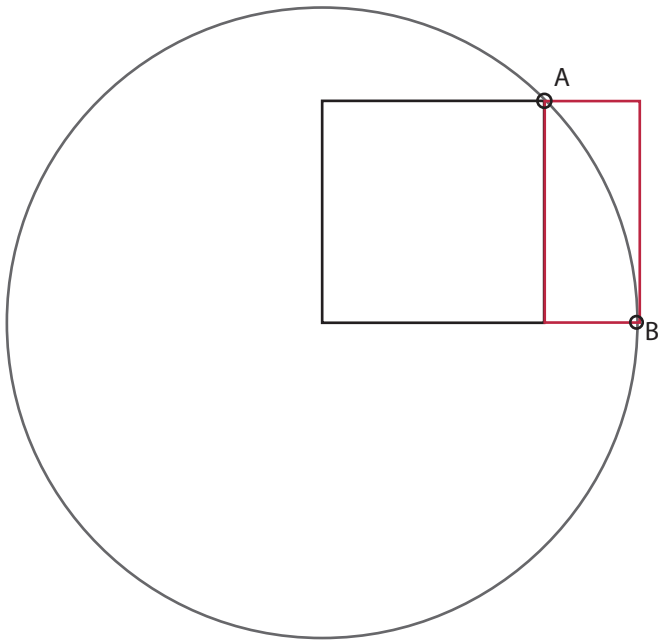
# Constructing a $\sqrt{2}$ rectangle in Illustrator (This is very much like drawing a golden section rectangle.)



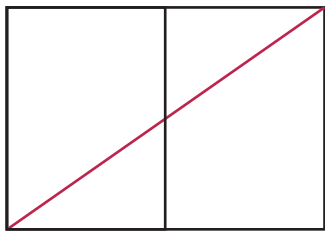
1. Draw a perfect square by holding down shift



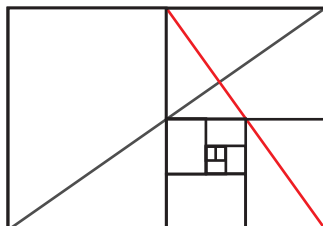
2. Hold down the **alt** (Windows) or **option** (Mac) key to change the center point to the corner of the square (marked 'A'). Simultaneously, hold down the **shift** key to constrain the proportions of the circle.



3. Drag a rectangle over so it touches the circle at points A and B. Now you can delete the circle.

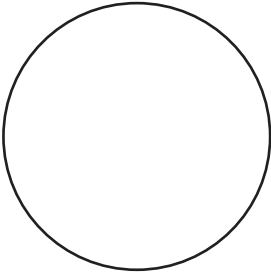


4. Subdivide the overall rectangle in half with the help of a diagonal line so you get 2 smaller  $\sqrt{2}$  rectangles

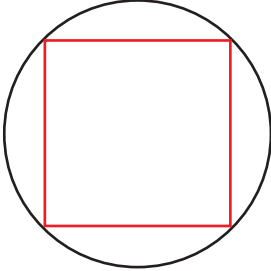


5. You can essentially keep endlessly dividing in half- hence why the European DIN paper size is based on  $\sqrt{2}$  rectangles

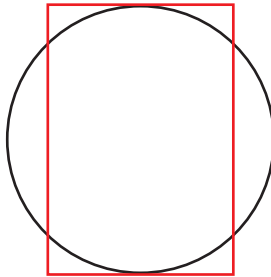
## An even easier way to make a $\sqrt{2}$ rectangle



1. Make a perfect circle by holding down the shift key.



2. Draw a perfect square inside the circle. Check to make sure the x: values of the square and circle are identical (under the Transform palette) to see that they are aligned.



3. Pull the square up so it touches the top and bottom of the circle at the midpoint of its shorter sides. You now have a  $\sqrt{2}$  rectangle. Subdivide as before.

*Note: make sure the square has a transparent fill when doing this.*