

# MathFLIX CHALLENGE

## *Making a six-pointed star*

Today, law enforcement badges come in many different shapes. However, in the nineteenth century, only six-pointed stars were used. It is easy to construct a six-pointed star using only a compass and a ruler. Follow our simple directions and you'll see how.

1. Use a compass to trace the circle with a radius of 2 inches which we created below.

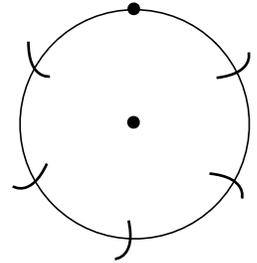
2. Draw a point on the circumference of the circle and place the point of the compass on that point that you made.

3. Do NOT change the radius while you use the compass to make a pencil mark on the circumference to the right and left of your point.

4. Without changing the radius, move the point of the compass to one of the marks you made on the circumference and make another mark.

5. Continue making marks around the circumference until you have made 6 equidistant marks on the circumference of your circle.

6. Use a ruler and connect every other mark to create a triangle. Connect the remaining marks to create the second triangle. *What regular polygon do you see in the center of this 6-pointed star? Can you create another regular polygon in the center?*



***Create a six-pointed star in this circle.***

