There are 360 degrees in a circle. With a ruler and a compass one can make a polygon with equal sides for all the numbers 1 through 10 except for 7.

$$360/1 = 360$$

$$360/2 = 180$$

$$360/3 = 120$$

$$360/4 = 90$$

$$360/5 = 72$$

$$360/6 = 60$$

$$360/7 = 51.428571428571428571428571...$$

$$360/8 = 45$$

$$360/9 = 40$$

$$360/10 = 36$$