

## Circumference & Diameter

Jordan works with his uncle to make a beanbag toss game for his party. Jordan knows the circumference of the circular holes on the board of the beanbag toss game must be larger than the beanbags.

If Jordan knows that a beanbag is 3 inches across, what could be the circumference of the holes in the board?

Jordan can find the circumference by using this equation:

$$C = \pi(D)$$

This equation says “the circumference equals pi times the diameter.” When he solves this equation, Jordan will find the circumference:

$$C = 3.14(3)$$

$$C = 9.42 \text{ in.}$$

What if Jordan started out with the circumference instead? He would use the same equation and solve for  $D$ . Let's say Jordan knows that  $C = 15.7$ .

$$C = \pi(D)$$

$$15.7 = 3.14(D)$$

$$\left(\frac{1}{3.14}\right)(15.7) = \frac{1}{3.14}(3.14)(D)$$

$$\left(\frac{15.7}{3.14}\right) = D$$

$$5 \text{ in.} = D$$

Jordan will need beanbags with lengths of less than 5 inches to fit through the circular holes. With this equation, you can solve for circumference or diameter, as long as you know the value of one of them.