

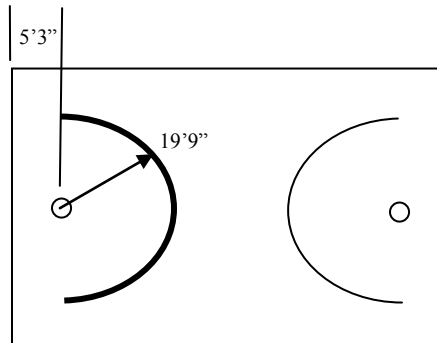
The JETS Challenge

Provided by Dave Meredith, Associate Professor,
Penn State University-Fayette

Challenge 101— The 3-Point Challenge

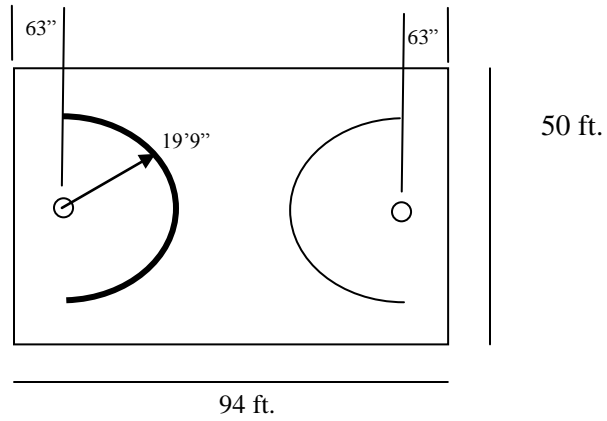
Problem:

On March 14, 2006, Chris Lofton from the Tennessee Volunteers was named to the All-SEC honors basketball team. He set the school record for the most 3-point field goals in a game (9), most in a season (106), and highest average number of 3-pointers (3.78) per game. An NCAA basketball court is 94 ft long by 50 ft wide. The 3-point arc is 19'9" in radius from the center of the basket, and the basket is 5'3" from the base line.



What fraction of the basketball court is theoretically within 3-point range?

Solution:



Total area:

$$94 \times 50 = 4700 \text{ ft}^2$$

Circle with radius 19'9"

$$A = \pi r^2$$

$$= \pi (19 \frac{9}{12})^2 \text{ ft.}$$

$$= 1225.417484 \text{ ft.}$$

Fraction

$$= \frac{1225.417484}{4700} = .260727$$

$$\text{Answer} = .2607$$