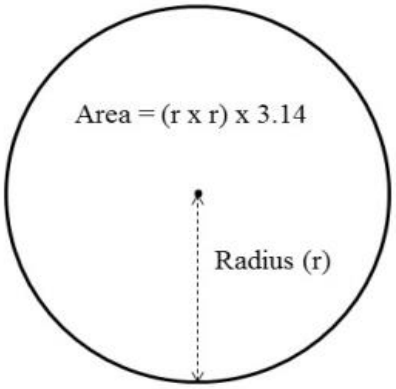
Area of Circular Fields

To find the area of a circle, multiply the radius of the circle (the distance from the center to the edge) by the radius of the circle by 3.14 (π). Yes, that is right — you want to multiple the radius of the circle by itself. The diameter is the distance from one edge of a circle, through the center point, to the opposite edge, or twice the radius.

$$\text{Area in acres} = \frac{3.14 \times \text{radius in feet} \times \text{radius in feet}}{43{,}560 \text{ sq ft per acre}}$$



1. ***What is the area (in acres) of a circular field with a diameter of 1,320 ft.?***

2. ***What is the area (in acres) of a circular field with a diameter of 2,640 ft.?***

3. ***What is the area (in acres) of a circular field with a diameter of 3,000 ft.***

Answers:

1. What is the area (in acres) of a circular field with a diameter of 1,320 ft.?

$\frac{1{,}320}{2}$ = radius of 660 ft.

$$\frac{3.14 \times 660 \text{ ft} \times 660 \text{ ft}}{43{,}560 \text{ sq ft per acre}} = \frac{1{,}367{,}784 \text{ sq ft}}{43{,}560 \text{ sq ft per acre}} = 31.4 \text{ acres}$$

2. What is the area (in acres) of a circular field with a diameter of 2,640 ft.?

$\frac{2{,}640}{2}$ = radius of 1,320 ft.

$$\frac{3.14 \times 1{,}320 \text{ ft} \times 1{,}320 \text{ ft}}{43{,}560 \text{ sq ft per acre}} = \frac{5{,}471{,}136 \text{ sq ft}}{43{,}560 \text{ sq ft per acre}} = 125.6 \text{ acres}$$

3. What is the area (in acres) of a circular field with a diameter of 3,000 ft.?

$\frac{3{,}000}{2}$ = radius of 1,500 ft.

$$\frac{3.14 \times 1{,}500 \text{ ft} \times 1{,}500 \text{ ft}}{43{,}560 \text{ sq ft per acre}} = \frac{7{,}065{,}000 \text{ sq ft}}{43{,}560 \text{ sq ft per acre}} = 162 \text{ acres}$$