

Problem 34

American football is played on a 100-yd-long field, excluding the end zones. How long is the field in meters? (Assume that 1 m = 3.281 ft.)

Solution

Multiply by the appropriate conversion factors to get the desired units.

$$100 \text{ yd} = 100 \cancel{\text{yd}} \times \frac{3 \cancel{\text{ft}}}{1 \cancel{\text{yd}}} \times \frac{1 \text{ m}}{3.281 \cancel{\text{ft}}} \approx 91.4 \text{ m}$$