1. An NCAA Football field has a playing area that is 120 yards from end zone back edge to opposite end zone back edge. The width of the field between the side lines is 160 feet.

\[(4) \quad \text{a. If } 1.00 \text{ inch equals } 2.54 \text{ cm, calculate the area of an NCAA football filed in } m^2.\]

\[
A = (120 \text{ yds})(160 \text{ ft})(\frac{3 \text{ ft}}{\text{ yd}})(\frac{12 \text{ in}}{\text{ ft}})^2(\frac{2.54 \text{ cm}}{1 \text{ in}})^2(\frac{1 \text{ m}}{100 \text{ cm}})^2
\]

\[= 5350 \text{ m}^2\]

\[(3) \quad \text{b. If } 1.00 \text{ acre equals } 43560 \text{ ft}^2, \text{ calculate the area of an NCAA football field in acres.}\]

\[
A = (120 \text{ yds})(160 \text{ ft})(\frac{3 \text{ ft}}{\text{ yd}})(\frac{1 \text{ ACRE}}{43560 \text{ ft}^2}) = 1.32 \text{ ACRE}
\]

2. An object moves along the x axis according to the equation \(x = 16t^2 + 2t + 5\). If \(x\) has units of meters and \(t\) has units of seconds,

\[(1) \quad \text{a. What are the units of the coefficient } 16?\]

\[16 \text{ m/s}^2\]

\[(1) \quad \text{b. What are the units of the coefficient } 2?\]

\[2 \text{ m/s}\]

\[(1) \quad \text{c. What are the units of the coefficient } 5?\]

\[5 \text{ m}\]