7.3 Trigonometric Substitution

1. What trigonometric substitution should be made to evaluate \( \int \frac{dx}{(16 - x^2)^{3/2}} \)?

   (a) \( u = 16 - x^2 \)
   
   (b) \( x = 16 \sin \theta \)
   
   (c) \( x = 4 \sin \theta \)
   
   (d) This integral cannot be evaluated using trigonometric substitution.