

1. Describe the transformations required to get the given function. Describe the domain and range.

$$g(x) = 3 \arccos\left(\frac{x}{2}\right)$$

2. Find an exact solution to the equation without a calculator.

$$\tan^{-1} x = -1$$

3. Find an algebraic expression equivalent to the given expression.

$$\cos(\tan^{-1} x)$$

$$\sin(\arccos 3x)$$