**Homework 8**

**Part 1: Finding Exact Values:**

Find the exact value of each expression in radians.

1. arcsin(sqrt(2)​/2)
2. cos−1(−1/2)
3. arctan(0)
4. sin−1(−1)
5. arccos(−sqrt(3)​/2)
6. tan−1(−3​)
7. arcsin(3) (Is this possible? Why or why not?)

**Part 2: Composition of Functions:**

Find the exact value of each expression.

1. sin(arccos(3/5))
2. tan(sin−1(5/13))
3. csc(arctan(2)) (Hint: csc=H/O)
4. cos(sin−1(−1/3)) (Hint: The adjacent side will be positive in Q IV)
5. sin(tan−1(−4/3))

**Part 3: Review**

13. Write a sine equation for a function with an amplitude of 2, a period of π, a phase shift of π/4 to the right, and a vertical shift of 1 down.