

Name _____

- You have 20 minutes
- No calculators
- Show sufficient work

1. (1 point) Evaluate $\cot\left(\frac{-4\pi}{3}\right)$.

2. (3 points) Given an acute angle θ for which $\tan(\theta) = 3$, evaluate $\cos\left(\frac{\pi}{2} + \theta\right)$.

3. (3 points) Determine the domain of the given function.

$$f(x) = \frac{\sqrt{3 \sin(x) + 10}}{\sqrt{7-x} - \sqrt{2x-5}}$$

4. (3 points) Use the definitions of even and odd functions to prove whether the following function is even, odd or neither.

$$f(x) = x^5 \cos(x^3) + x^4 \sin(x)$$