

Name _____

- You have 15 minutes
- No calculators
- Show sufficient work

1. (4 points) Determine the domain of the given function.

$$f(x) = \frac{\sqrt{25 - x^2} + \sqrt{9 + \sin(x - 1)}}{x^2 - 8x - 20}$$

2. (3 points) Given an acute angle θ for which $\sec(\theta) = 8$, evaluate the following quantities.

(a) $\cos(\theta)$

(b) $\sin(\theta)$

(c) $\cos(\pi + \theta)$

3. (3 points) Suppose that $f(x)$ is an odd function. If $g(x) = x^4 \sin(f(x))$, then is $g(x)$ an odd function, an even function or neither? Give a very clear justification for your answer.