

Math 2260 Quiz 18

Name _____

Points will be deducted for untidy or disorganized answers

1. (2 points) Find a power series representation for the function

$$f(x) = \frac{x}{2+x}$$

and determine the interval of convergence.

2. (3 points) Find the Taylor series for $f(x) = x^2 - 3x + 7$ centered at the following points.

(a) $a = 0$ (b) $a = 1$

Recall that the Taylor series of f centered at a is given by

$$\sum_{n=0}^{\infty} \frac{f^{(n)}(a)}{n!} (x-a)^n = f(a) + f'(a)(x-a) + \frac{f''(a)}{2!} (x-a)^2 + \dots + \frac{f^{(n)}(a)}{n!} (x-a)^n + \dots$$