

Math 199 CD3 Merit Worksheet 18: Finding power Series of Some Functions

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Find the power series of the following functions

1.

$$f(x) = \frac{1}{(1-x)^2}$$

2.

$$g(x) = \ln(5-x)$$

3.

$$f(x) = \frac{6}{1+7x^4}$$

4.

$$f(x) = \frac{x^3}{3-x^2}$$

5.

$$f(x) = \frac{3x^2}{5 - 2\sqrt[3]{x}}$$

6.

$$f(x) = \frac{\sqrt[5]{x^2}}{4 - 3x^2}$$

7.

$$f(x) = \frac{x^4}{2 + x^9}$$