

# 9.9 Representation of Functions by Power Series

Name:

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**P 6.** Find a power series for the function

$$f(x) = \frac{2}{6 - x}$$

centered at  $-2$ .

**P 8.** Find a power series for the function

$$f(x) = \frac{1}{1 - 5x}$$

centered at  $0$ .

**P 17.** Find a power series centered at 0 for the function

$$h(x) = \frac{1}{1+x} + \frac{1}{1-x}$$

Identify the interval of convergence.

**P 19.** Find a power series centered at 0 for the function

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

Identify the interval of convergence.

**P 22.** Find a power series centered at 0 for the function

$$f(x) = \ln(1 - x^2)$$

Identify the interval of convergence.