10.2 Taylor Series

Name: Date:

P 4. Find the first four nonzero terms of the Taylor series for $\ln(1 - x)$ about 0.

P 6. Find the first four nonzero terms of the Taylor series for $\dfrac{1}{\sqrt{1 + x}}$ about 0.

P 8. Find the first four terms of the Taylor series for $\sin x$ about $\pi/4$.

P 24. Compute the binomial series expansion for $(1 + x)^3$. What do you notice?

P 25. By graphing the function $\dfrac{1}{\sqrt{1+x}}$ and several of its Taylor polynomials, estimate the interval of convergence of the series you found in Exercise 6.