

POWER SERIES DRILL

last update July 20, 2000

Find the first three non-zero terms of the Taylor series for the following functions:

a. $f(x) = \frac{3}{2-x}$ around $x_0 = 0$.

b. $f(x) = \frac{3}{2-x}$ around $x_0 = 1$.

c. $f(x) = A \exp(Bx)$ around $x_0 = 0$.

d. $f(x) = A \exp(Bx)$ around an arbitrary value of x_0 .

e. $f(x) = A \sin(Bx)$ around $x_0 = 0$.

f. $f(x) = A \sin(Bx)$ around an arbitrary value of x_0 .

g. $f(x) = A \sin(Bx)$ around $x_0 = \pi/2$.

h. $f(x) = A \cos(Bx)$ around $x_0 = 0$.