

4) Find the Taylor series at $x = 0$.

a)

$$\cos(x^{2/3}/\sqrt{2})$$

b)

$$\frac{1}{2-x}$$

c)

$$x^2 \sin x$$

d)

$$\sin^2 x$$

e) Estimate the error if $P_4(x) = 1 + x + (x^2/2) + (x^3/6) + (x^4/24)$ is used to estimate the value of e^x at $x = 1/2$.