

Problems. January 27.

For each of the following functions find i) a power series representation,
ii) the radius convergence of the series.

1.

$$\frac{1}{(1-x)^3}$$

2.

$$\frac{2x}{(1+3x^3)^3}$$

3.

$$\ln(1+x^2)$$

4.

$$x \arctan 2x^3$$