MATE 3032 assignment 11: sections 11.8, 11.9

93. Find the radius of convergence and the interval of convergence of the series:

    (a) $\sum_{n=1}^{\infty} n^n x^n$

    (b) $\sum_{n=1}^{\infty} 2^n (n+1)^2 x^n$

    (c) $\sum_{n=1}^{\infty} \frac{(x+2)^n}{2+n^2}$

    (d) $\sum_{n=1}^{\infty} (-1)^n \frac{n^2 x^n}{2 \cdot 4 \cdot \cdots (2n)}$

    (e) $\sum_{k=1}^{\infty} \frac{(3x-4)^k}{k^3}$.

94. Exercise 32 p.752.

95. Exercise 30 p.751.

96. Exercise 40 p.752.

97. Exercise 2 p.757.

98. Exercise 13 p.757.

99. Find a power series representation and determine the radius of convergence:

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

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

100. Find $\int \frac{x}{1-x^3}\, dx$ as a power series. What is its radius of convergence?

101. Exercise 23 p.758.

102. Exercise 38 p.758.

103. Exercise 40 p.758.