

## Practice problems on Taylor & power series: Answers to selected problems

**Prob 3**  $S_{50}$  is an underestimate of the actual sum. See Theorem 2 in page 730.

**Prob 4**

(b)  $|x - \frac{1}{2}| < 2$ . So  $R = 2$ ,  $-1.5 < x < 2.5$

(c)  $|x + \frac{3}{2}| < \frac{1}{2}$ . So  $R = \frac{1}{2}$ ,  $-2 < x \leq -1$

See example 5 in pg 741 for help on above problems.

**Prob 8** (c) use the fact

$$2^x = e^{x \ln 2}$$

**Prob 9**

(a)  $\exp(-x^4)$

(b)  $\cos(\pi/6) = \sqrt{3}/2$

(c)  $e^x - 1$

**Prob 10**

$$\frac{(0.3)^7}{7!}$$