

## HW #17 Final Answers

1.  $\frac{16}{3} + 2(x-4) + \frac{1}{8}(x-4)^2 - \frac{1}{192}(x-4)^3$  ↓ STOP: First 4 non-zero terms only

2.  $\frac{1}{3} - \frac{1}{9}(x-2) + \frac{1}{27}(x-2)^2 - \frac{1}{81}(x-2)^3$  ↓ STOP: First 4 non-zero terms only

3.  $\sum_{n=0}^{\infty} \frac{(-1)^n 2^n x^n}{n!}$

4.  $\sum_{n=0}^{\infty} \frac{x^{2n+1}}{(2n+1)!}$

5.  $\sum_{n=0}^{\infty} \frac{(-1)^n 7^{2n+1} (2n+4) x^{2n+3}}{2n+1}$   $R = \frac{1}{7}$  STILL

6.  $\sum_{n=0}^{\infty} \frac{(-1)^n 7^{2n+1} x^{2n+5}}{(2n+1)(2n+5)} + C$   $R = \frac{1}{7}$  STILL

7.  $\sum_{n=0}^{\infty} \frac{(-1)^n 6^{n+1} (n+3) x^{n+2}}{n+1}$   $R = \frac{1}{6}$  STILL

8.  $\sum_{n=0}^{\infty} \frac{(-1)^n x^{3n+5}}{n! (3n+5)} + C$   $R = \infty$  STILL

9.  $e^7$

10.  $e^{-5}$

11.  $e^{-x^4}$

12.  $\frac{\sqrt{3}}{2}$

13.  $e^{3/5}$

14.  $\frac{\pi}{4}$

15.  $\frac{1}{2}$

16.  $e^3 - 1$

17.  $-1$