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Use a MacLaurin series to obtain the Maclaurin series for the given function.

29. $f(x) = \sin \pi x = \sum_{n=0}^{\infty} (-1)^n \cdot \frac{(\pi x)^{2n+1}}{(2n+1)!}$

$$= \boxed{\sum_{n=0}^{\infty} (-1)^n \cdot \frac{\pi^{2n+1} \cdot x^{2n+1}}{(2n+1)!}}$$

30. $f(x) = \cos(\pi x/2) = \sum_{n=0}^{\infty} (-1)^n \cdot \frac{(\pi x/2)^{2n}}{(2n)!}$

$$= \boxed{\sum_{n=0}^{\infty} (-1)^n \cdot \frac{\pi^{2n}}{2^{2n} \cdot (2n)!} \cdot x^{2n}}$$

31. $f(x) = e^x + e^{2x} = \sum_{n=0}^{\infty} \frac{x^n}{n!} + \sum_{n=0}^{\infty} \frac{(2x)^n}{n!}$

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

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

32. $f(x) = e^x + 2e^{-x} = \sum_{n=0}^{\infty} \frac{x^n}{n!} + 2\sum_{n=0}^{\infty} \frac{(-x)^n}{n!}$

$$= \sum_{n=0}^{\infty} \frac{x^n + 2(-1)^n \cdot x^n}{n!} = \boxed{\sum_{n=0}^{\infty} \frac{(1+2(-1)^n)}{n!} \cdot x^n}$$

33. $f(x) = x\cos(1/2x^2) = \sum_{n=0}^{\infty} x \cdot \frac{(-1)^n \cdot (\frac{1}{2}x^2)^{2n}}{(2n)!} = \sum_{n=0}^{\infty} \frac{x \cdot (-1)^n \cdot x^{4n}}{2^{2n} \cdot (2n)!}$

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