

## Problem Set 60

$$2. \quad e^x = 1 + x + \frac{x^2}{2} + \frac{x^3}{3!} + \frac{x^4}{4!} + \dots$$
$$= \sum_{n=0}^{\infty} \frac{x^n}{n!}$$

$$4. \quad -e^\pi \approx -23.141$$

$$6. \quad -2\sqrt{1 + \cos x} + C$$

$$8. \quad \frac{8}{3} \text{ units}^2$$

$$10. \quad \frac{27}{4} \text{ units}^2$$

$$12. \quad D$$

$$14. \quad y = \arcsin x$$

$$16. \quad y' = \frac{\cot x}{x^2 - 1} - \frac{2x \ln |\sin x|}{(x^2 - 1)^2}$$

$$18. \quad 1$$

$$20. \quad C$$

$$22. \quad -1$$

$$24a. \quad x \approx 1.206$$

$$b. \quad x = \log(8 + \sqrt{65}) \approx 1.206$$