

FOR

Pages 449-451

1. (a) 8 (b) k 3. (a) 90 (b) $k^2 + 3k + 2$
 5. (a) 10 (b) 1 (c) 15 (d) 190 (e) 190

Pages 454-455

1. $1 + 5x + 10x^2 + 10x^3 + 5x^4 + x^5$
 3. $1 - 12x + 60x^2 - 160x^3 + 240x^4 - 192x^5 + 64x^6$
 5. $81x^4 + 108x^3y + 54x^2y^2 + 12xy^3 + y^4$
 7. $1 - 7\sqrt{x} + 21x - 35x\sqrt{x} + 35x^2 - 21x^2\sqrt{x} + 7x^3 - x^3\sqrt{x}$
 9. (a) $1 + 12x + 66x^2 + 220x^3 + 495x^4 + \dots$ (b) 1.127 (approx.)
 11. $x^8 + 16x^7y + 112x^6y^2 + 448x^5y^3 + \dots$ 13. $\frac{1^5}{1^2 \cdot 8}$ 15. $\frac{6^3}{2^5 \cdot 8}$

Pages 457-458

1. (a) $1 + \frac{1}{2}x - \frac{1}{8}x^2 + \frac{1}{16}x^3 - \dots$ (b) 1.0198 (approx.)
 3. (a) $1 - 2x + 3x^2 - 4x^3 + \dots$ (b) 1.0203 (approx.)
 7. $1 + \frac{1}{4} + \frac{3}{8} + \frac{5}{16} + \dots$

Pages 461-463

3. Convergent 5. Convergent 7. 2.718 (approx.) 9. 1.0152 (approx.)
 13. -0.223 (approx.) 15. 0.09983 (approx.) 17. $1 - \frac{x^2}{3!} + \frac{x^4}{5!} - \frac{x^6}{7!} + \dots$
 19. (b) $-0.22307, 0.18227$ (c) $-0.32843, 0.36454, 0.69297$

Chapter Review, Pages 463-466

1. (a) $-\frac{5}{2}$ (b) -35 3. (a) $\frac{9[1 - (\frac{1}{3})^n]}{2}$ (b) $\frac{2}{3}$ 5. (a) $\frac{7}{9}$ (b) $\frac{17}{45}$
 9. (a) 0 (b) 1 (c) 0 (d) none (e) 3 (f) none 11. $|x| < 2; \frac{x}{2-x}$
 13. (a) yes (b) no 15. (a) $\frac{1}{3}$ (b) no
 17. (a) convergent, $\frac{4}{3}$ (b) divergent (c) convergent, $\frac{2}{3}$ (d) convergent, 1
 19. $x^5 + 10x^4 + 40x^3 + 80x^2 + 80x + 32$
 21. $2187x^7 - 10206x^6y + 20412x^5y^2 - 22680x^4y^3 + 15120x^3y^4 - 6048x^2y^5 + 1344xy^6 - 128y^7$ 23. (a) $1 - \frac{1}{3}x + \frac{2}{9}x^2 - \frac{1}{27}x^3 + \dots$ (b) 1.712 (approx.)
 25. (a) convergent (b) divergent

Pages 472-473

1. 210 3. 24 5. 108 7. 12 9. (a) 60 (b) 125 11. (a) 125 (b) π^r
 13. (a) 96 (b) 48 15. 1728 17. (a) 105 (b) 2 (c) 80 19. 6

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