

Dec. 17-1 pp. 920-921

- 26. 2 a) 10
- 34. 2 b) 14
- 36. 0

Dec. 17-2 pp. 928-929

- 27. $4a^3 - 4a$
- 28. $4x^3 - 6x$

- a) $18a^{2-2}$
- b) $\frac{-2}{a^3}$

c) $385x^{76} + \frac{5}{x^6} - \frac{3}{x^2} + \frac{2}{x^5}$

d) $\frac{7}{4}x^{34} - \frac{1}{6x^{54}}$

e) $\frac{3}{2}x^4 + \frac{16}{7}x^{-9/7} + 5$

15. $x^2 \cdot -3(x^2+1)^{-4} \cdot 2x + (x^2+1)^{-3} \cdot 2x$

16. $\frac{1}{2}(4x^2-1)^{-1/2} \cdot 8x$

17. $\frac{(4x-1) \cdot 2 - (2x+3) \cdot 4}{(4x-1)^2}$

18. $\frac{(x^4+1) \cdot 3x^2 - (x^3-1) \cdot 4x^3}{(x^4+1)^2}$

19. $-3 - \frac{(x+2) \cdot 0 - 6 \cdot 1}{(x+2)^2}$

a) $(x^5 - 3x^4 + 4) \cdot \left[\frac{(x^3 - 2x)(2x) - (x^2 + 1)(3x^2 - 2)}{(x^3 - 2x)^2} \right] + \left(\frac{x^2 + 1}{x^3 - 2x} \right) \cdot (5x^4 - 12x^3)$

b) $3 \left[8x^{-5} + (x^2 - 3x + 4)^7 \right]^2 \cdot [-40x^{-6} + 7(x^2 - 3x + 4)^6 \cdot (2x - 3)]$

c) $\frac{(6x^9 + 2x^3)}{(x^4 + 5x)(21x^4 - 4x) + (3x^7 - 2x^2)(4x^3 + 5)} - \frac{(x^4 + 5x)(3x^7 - 2x^2) \cdot (54x^8 + 6x^2)}{(6x^9 + 2x^3)^2}$

d) $10 \left(\frac{8x-5}{3x^2+2x^9} \right)^9 \cdot \left[\frac{(3x^2+2x^9) \cdot 0.8 - (8x-5)(6x+18x^4)}{(3x^2+2x^9)^2} \right]$

e) $(x^2+2)^4 \cdot 7(3x^6-2x)^6 \cdot (18x^5-2) + (3x^6-2x)^7 \cdot 4(x^2+2)^3 \cdot 2x$

Dec. 17-4 pp. 942-943

- 14. $\frac{\pi x^2}{2} + \frac{x^3}{3} + C$
- a) $\frac{x^6}{3} + \frac{5x^4}{2} - \frac{x^3}{3} - 5x + C$
- b) $\frac{16x^5}{5} + 8x^3 + 9x + C$
- c) $-\frac{3}{x} - \frac{5}{3x^3} + C$
- d) $\frac{3}{17}t^{11/3} + \frac{3}{4}t^{9/3} - \frac{9t^{2/3}}{2} + C$
- e) $\frac{3}{2}x^2 - 6x - \frac{5}{x} + C$

Dec. 17-5 pp. 948-949

~~e) $\frac{3x}{2}$~~ f) $\frac{102936}{7}$ 8. 18 units²

32. $4(x^3 - 2x + 1)^3 \cdot (3x^2 - 2)$

34. $x^2 \cdot -1(x+1)^{-2} \cdot 1 + (x+1)^{-1} \cdot 2x$

36. $\frac{(x^2+4)(1) - (x+1) \cdot 2x}{(x^2+4)^2}$

38. $x \cdot \frac{1}{2}(1-x^3)^{-1/2} \cdot -3x^2 + (1-x^3)^{1/2} \cdot 1$

41. $(1 + \frac{1}{x}) \cdot x^{-2} + (2 - \frac{1}{x}) \cdot -1x^{-2}$