

10. $\frac{64x^6}{729} - \frac{32x^4}{27} + \frac{20x^2}{3} - 20 + \frac{135}{4x^2} - \frac{243}{8x^4} + \frac{729}{64x^6}$.
11. $\frac{1}{256} + \frac{a}{16} + \frac{7a^2}{16} + \frac{7a^3}{4} + \frac{35a^4}{8} + 7a^5 + 7a^6 + 4a^7 + a^8$.
12. $1 - \frac{10}{x} + \frac{45}{x^2} - \frac{120}{x^3} + \frac{210}{x^4} - \frac{252}{x^5} + \frac{210}{x^6} - \frac{120}{x^7} + \frac{45}{x^8} - \frac{10}{x^9} + \frac{1}{x^{10}}$.
13. $35750x^{10}$. 14. $-112640x^9$. 15. $-312x^2$.
16. $\frac{30}{27} (5x)^4 (8y)^{-7}$. 17. $40a^7b^3$. 18. $\frac{1120}{81} a^4b^4$.
19. $\frac{10500}{x^4}$. 20. $\frac{70x^6y^{10}}{a^2b^5}$. 21. $2x^4 + 24x^2 + 8$.
22. $2x(16x^4 - 20x^2a^2 + 5a^4)$. 23. $140\sqrt{2}$.
24. $2(365 - 363x + 63x^2 - x^3)$. 25. 252 . 26. $-\frac{429}{16}x^{14}$.
27. $110565a^4$. 28. $84a^3b^6$. 29. $1365, -1365$.
30. $\frac{189a^{17}}{8} - \frac{21}{16}a^{19}$. 31. $\frac{7}{18}$. 32. 18564 .
33. $\frac{1}{2}(n-r) - \frac{1}{2}(n+r)$. 34. $(-1)^n \frac{3n}{n} \frac{1}{2n}$.

XIII. b. PAGES 147, 148.

1. The 9th. 2. The 12th. 3. The 6th. 4. The 10th and 11th.
5. The $3^{rd} - 6\frac{1}{2}$. 6. The 4th and 5th = $\frac{7}{144}$. 9. $x=2, y=3, n=5$.
10. $1 + 8x + 20x^2 + 8x^3 - 26x^4 - 8x^5 + 20x^6 - 8x^7 + x^8$.
11. $27x^6 - 54ax^5 + 117a^2x^4 - 116a^3x^3 + 117a^4x^2 - 54a^5x + 27a^6$.
12. $\frac{1}{r-1} \frac{n}{n-r+1} x^{r-1} a^{n-r+1}$. 13. $(-1)^n \frac{2n+1}{p+1-2n-p} x^{2p-2n+1}$.
14. 11. 15. $2r-n$.

XIV. a. PAGE 155.

1. $1 - \frac{1}{2}x + \frac{1}{8}x^2 - \frac{1}{16}x^3$. 2. $1 + \frac{3}{2}x + \frac{3}{8}x^2 - \frac{1}{16}x^3$.
3. $1 - \frac{2}{5}x + \frac{3}{25}x^2 - \frac{8}{125}x^3$. 4. $1 - 2x^2 + 3x^4 - 4x^6$.
5. $1 - x + x^2 - \frac{5}{3}x^3$. 6. $1 + x + 2x^2 + \frac{14}{3}x^3$.
7. $1 - x + \frac{3}{2}x^2 - \frac{5}{2}x^3$. 8. $1 - x + \frac{2}{3}x^2 - \frac{10}{27}x^3$.
9. $1 + x + \frac{x^2}{6} - \frac{x^3}{51}$. 10. $1 - 2a + \frac{5}{2}a^2 - \frac{5}{2}a^3$.