

(c) 720; (d) 576.

11. 12. 12. 72.

80. 6. 14400.

17.

 $\frac{1}{6}$. 6. $\frac{1}{3}$.13. $\frac{3}{7}$. 14. $\frac{7}{27}$. $\frac{n}{2^n}$. $\frac{9}{80}$. $= \frac{2}{21}$, $F = \frac{1}{21}$. $\frac{1}{3}$. $= \frac{1}{2^n - 1}$.

the first purse.

3. $\frac{16}{27}$.

.655;

025.

2. 69. 4. \$296.30. 5. 0.4533.

6. \$1000; \$1666.67; \$2111.11. 7. $a[1 - (1 - p)^n]$.

8. 0.1123. 9. \$1894. 10. \$1224.

278. 1. 140. 2. 70. 3. 112. 5. $22k$. 6. $28(j - 1)$.8. $54m^2$. 9. $\frac{11}{10}$.282. 1. $1 + x + x^2 + x^3 + \text{etc.}$ 2. $1 + 2x + 2^2x^2 + 2^3x^3 + \text{etc.}$ 3. $1 - 2x + 2x^2 - 2x^3 + \text{etc.}$ 4. $1 + 2x + 2x^2 + 2x^3 + \text{etc.}$ 5. $1 - x - x^2 + 5x^3 - 7x^4 - \text{etc.}$ 6. $1 + x + x^2 + x^3 + x^4 + \text{etc.}$ 7. $1 - 4x + 8x^2 - 4x^3 - 16x^4 + \text{etc.}$ 8. $1 - 2x + 2x^2 - x^3 - x^4 + \text{etc.}$ 283. 1. $1 - 3x + 3x^2 - 3x^3 + \text{etc.}$ 2. $1 + 2x + x^2 - x^3 - 2x^4 - \text{etc.}$ 288. 1. $\frac{r(2n - r + 1)}{2}$. 2. $\frac{h(h + 1) - s(s + 1)}{2}$.3. $\frac{n(n + 1) - m(m - 1)}{2}$. 4. $\frac{p(p + 2k - 1)}{2}$.6. $3n^2 - 3n + 1$.289. 1. 165. 2. $\frac{n(n + 1)(n + 2) - k(k + 1)(k + 2)}{1 \cdot 2 \cdot 3}$.3. $\frac{n(n + 1)(n + 2) - (m - 1)m(m + 1)}{1 \cdot 2 \cdot 3}$.293. 1. $S_1 = 210$; $S_2 = 2870$; $S_3 = 42665$.2. $S_1 = r^2$; $S_2 = \frac{r(4r^2 - 1)}{3}$.3. $S_1 = r(r + 1)$; $S_2 = \frac{2r(r + 1)(2r + 1)}{3}$.4. $N_3 = 3pq - 3(p + q) + 5$; $Np = spq - \frac{s(s - 1)}{6}(3p + 3q - 2s + 1)$.5. $5a + 15b + 55c$. 6. $b \left[a + \frac{b + 1}{2} \left(b + \frac{2b + 1}{3} c \right) \right]$ 295. 1. $\frac{1}{3} - \frac{1}{n + 3}$. 2. $\frac{1}{2} \left(\frac{1}{3} - \frac{1}{2n + 3} \right)$.3. $\frac{2}{3} \left(\frac{1}{2} + \frac{1}{3} + \frac{1}{4} - \frac{1}{n + 2} - \frac{1}{n + 3} - \frac{1}{n + 4} \right)$.4. $\frac{3}{2} \left(1 + \frac{1}{2} - \frac{1}{n + 1} - \frac{1}{n + 2} \right)$. 5. $\frac{1}{a}$.