8. $12 - 6 + 3 - \frac{3}{2} + \text{etc., } ad\ inf.$ 9. $\frac{1}{3}$ from A to B.

215. 1. $\frac{1}{9}$. 2. $\frac{2}{9}$. 3. 1. 4. $\frac{1}{10}$. 5. $\frac{5}{11}$. 6. $\frac{27}{110}$. 7. $\frac{108}{999}$.
8. $\frac{797}{1100}$.

216. 1. \$216.74. 3. 2.72325a.

4. $a\dfrac{\left(1+\frac{c}{100}\right)^n - 1}{\left(1+\frac{c}{100}\right)^{n+1} - \left(1+\frac{c}{100}\right)^n}$ and

$a\dfrac{\left(1+\frac{c}{100}\right)^n - 1}{\left(1+\frac{c}{100}\right)^n - \left(1+\frac{c}{100}\right)^{n-1}}$.

226 (a). 1. 440. 3. 74. 4. 148. 5. 0. 6. 0.
16. 1. 17. 4. 18. 10. 19. 20. 20. 35. 21. 56. 22. 0.
23. $-\frac{1}{4}$. 24. -1. 3. 74. 4. 148. 5. 0. 6. 0.

227. 1. $A_2 = A_1 - A_0$; $A_3 = -A_0$; $A_4 = -A_1$; etc.; $A_{10} = -A_1$.
2. $A_5 = 16A_1 - 15A_0$. 3. $A_5 = 43A_1 + 30A_0$.
4. $\frac{n+1}{2}(2A_0 + nk)$. 5. $\frac{r(r^n-1)}{r-1}A_0$.
6. $A_2 = kA_1 + A_0$; .... $A_6 = (120k^5 + 96k^3 + 9k)\,A_1 + (120k^4 + 36k^2 + 1)\,A_0$.

228. 1. $n - 4$ terms are omitted. 5. $s - 2$.
1. 120. 2. 720. 3. 40320. 4. 35. 5. 56.
1. 247. 2. 70.

230. 1. $2^3.3$. 2. $2^3.3^2$. 3. $2^2.5.13$. 4. 13^2. 5. $3^2.5^2$.
6. 2^8.

232. 2. 7. 3. 1. 4. 1. 5. 4.

233. 6. First wheel = 7, second = 5, third = 3 turns.

245. 1. $\frac{113}{355}$. 2. $\frac{17}{58}$. 3. $\frac{19}{72}$. 4. $\frac{5x+1}{3(5x+1)+x}$.
5. $\frac{bc+1}{a(bc+1)+c}$.

251. 2. $\frac{1}{6}$. 4. 720. 5. 24.