

1. A, \$225; B, \$150. 3. 54. 4. 42. 5. 67. 6. 81.
 7. $\frac{28}{45}$. 8. A, 86; B, 72. 9. 16 good, 26 poor.
 10. $\frac{14}{15}$. 11. $\frac{8}{15}$. 12. 25, 8. 13. 96, 37. 14. 24, 18.
 15. A in 9, and B in 18 d. 16. 28, 23. 17. 35, 28.
 18. I, 40; II, 30.
 19. Bought, 72¢ and 24¢; sold, 90¢ and 32¢.
 20. Coffee, $\frac{mp - ap}{mb - an}$; tea, $\frac{np - bp}{an - bm}$.
 21. I, $\frac{1}{2}$; II, $4\frac{1}{2}$. 22. $\frac{a(b - c)}{b - a}$.
 23. A, \$3000 @ 4%; B, \$4000 @ 5%; C, \$4500 @ 6%.
 24. I, 120; II, 114; III, 110.
161. 3. 12, 24, 66. 4. $66\frac{2}{3}$, $133\frac{1}{3}$, 200, $266\frac{2}{3}$, $333\frac{1}{3}$.
 5. $\frac{a}{a + b}$ and $\frac{b}{a + b}$. 6. 42. 18. 7. $\frac{m}{m - n}$ and $\frac{n}{m - n}$.
 8. $x = \frac{a}{a - b}$, $y = \frac{b}{a + b}$. 10. $\frac{a + 2}{a - 2}$. 11. 2.
 14. \$7536. 15. I, \$7700; II, \$12600. 16. 8.
 17. 448 and 1008. 18. $\frac{b}{a + b}$, $\frac{a}{a + b}$.
 19. 7 p. gold, 5 p. silver. 20. 5 p. gold, 3 p. silver.
 21. $\frac{2am + an + bm}{(m + n)(a + b)}$, water; $\frac{bm + 2bn + an}{(a + b)(m + n)}$, alcohol.
 22. $3am + 2an + bm : 3bn + 2bm + an$.
 23. $(p + q)am + pan + qbm : (p + q)bn + pbm + qan$.
 24. I, 5 : 3; II, 1 : 3.
173. 1. $1 + 4x + 10x^2 + 12x^3 + 9x^4$.
 2. $1 + 4x + 10x^2 + 20x^3 + 25x^4 + 24x^5 + 16x^6$
 3. $1 + 4x + 10x^2 + 20x^3 + 25x^4 + 34x^5 + 36x^6 + 30x^7 + 40x^8$
 $+ 25x^{10}$. 4. $1 + 4x + 10x^2 + 20x^3 + 25x^4 + 34x^5 + 48x^6$
 $+ 54x^7 + 76x^8 + 48x^9 + 25x^{10} + 60x^{11} + 36x^{12}$.
 5. $1 - 4x + 10x^2 - 20x^3 + 25x^4 - 24x^5 + 16x^6$.
177. 1. $(a + b)^{\frac{3}{2}}$, $(a + b)$, $(a + b)^{\frac{1}{2}}$.
 4. $(x + y)^{\frac{3}{2}}$, $(x + y)^{\frac{1}{2}}$, $(x + y)^{\frac{1}{2n}}$.
178. 17. $a^{\frac{1}{n}}(b - c)^{\frac{m}{n}}$.