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76. The cube is .0959... The fourth power is .0439...

77. The ratio of the prod. of the two smallest to the prod. of the two largest = ratio of the smallest to the largest. $\therefore$ when the smallest is 4 the largest is 6. Similarly the ratio of the intermediate one to the largest is 4 to 5. $\therefore$ when the largest is 6 the intermediate one is $\frac{4}{5}$ of 6, or $4\frac{4}{5}$. $\therefore$ the nos. are in the ratio of 4, $4\frac{4}{5}$, 6, &c.

78. Former rate is $2\frac{1}{2}\%$. $\therefore$ he must pay 3% on \$2500.

79. Suppose A gets \$24, then B gets $\frac{5}{4}$ of \$24, or \$30; C gets $\frac{7}{6}$ of \$30, or \$35; D gets $\frac{8}{5}$ of \$35, or $\$31\frac{5}{5}$. $\therefore$ it is divided in proportion of 24, 30, 35, $31\frac{5}{5}$, or 192, 240, 280, and 315.

80. 11, page 187.

81. The refund = 30% of $7\frac{1}{2}\%$ of \$42134 = \$948.015.

82. The length is $\frac{1}{10}$ and width $\frac{3}{10}$ of original; $\therefore$ area of end is $\frac{1}{10}$ of $\frac{3}{10}$, or $\frac{3}{100}$ of original. $\therefore$ the thickness is $\frac{2}{3}$ of original. $\therefore$ it is diminished $\frac{1}{3}$, or $20\frac{2}{3}\%$.

83. Incomes below + incomes above = £500000. $\therefore$ $\frac{1}{10}$ inc. below + $\frac{1}{10}$ inc. above = £25000. But $\frac{7}{10}$ inc. below + $\frac{1}{10}$ inc. above = £18750. $\therefore$ $\frac{5}{10}$ of inc. below = £6250.

84. 9, page 194.

85. Suppose he invests \$100 in oats, \$125 in barley and \$270 in wheat. The total selling price = \$108 + \$118.75 + \$307.80 = \$534.55, which is $\frac{1}{4}$ of the actual sum. $\therefore$ he invested \$2400 in oats.

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86. $\frac{2}{3}$ of no. of votes cast = 832. $\therefore$ no. cast = 3328. $\therefore$ $\frac{1}{3}$ of no. of electors = 3328. $\therefore$ no. = 4096.

87. They will beat 7, 8, 9 times in $\frac{1}{10}$ of a min., or thus: the time between successive heats is $\frac{7}{9}$, $\frac{8}{9}$, $\frac{9}{9}$ sec., and the l.c.m. of these is 6 sec.