PERCENTAGE

Form 1 Regular Course
Vol 3

Part 6 - Discount

1. (a) The amount that Mable pays $= 2700 - 486 = \$2214$

   (b) The percentage discount $= \frac{486}{2700} \times 100\% = 18\%$

2. The percentage discount $= \frac{1400 - 1309}{1400} \times 100\% = 6.5\%$

3. The required percentage discount $= \frac{1 - 0.9 \times 0.9}{1} \times 100\% = 19\%$

4. The final selling price $= x(1-10\%)(1+10\%) = \$0.99x$

   The percentage profit $= \frac{0.99x - 0.1x}{0.1x} \times 100\% = 890\%$

5. (a) The percentage discount $= \frac{1}{2} \times 100\% = 50\%$

   (b) The percentage discount $= \frac{1}{3} \times 100\% = \frac{100}{3}\%$

   (c) The percentage discount $= \frac{1}{4} \times 100\% = 25\%$

   (d) The percentage discount $= \frac{1}{5} \times 100\% = 20\%$

6. (a) The percentage discount $= \frac{2}{3+2} \times 100\% = 40\%$

   (b) The assumption is that the number of goods being purchased is the multiple of 5.
   For example, for the case of buying 8 eggs,
   the percentage discount $= \frac{2}{8} \times 100\% = 25\%$
   For the case of buying 10 eggs,
   the percentage discount $= \frac{4}{10} \times 100\% = 40\%$

Part 7 - Advanced Selling Problem

1. The selling price $= 400(1+60\%)(1-10\%) = \$576$

2. The marked price $= \dfrac{200(1+10\%)}{1-20\%} = \$275$

3. The cost $= \dfrac{60(0.8)}{1+20\%} = \$40$

4. (a) The selling price for that customer $= 2000 \times 0.95 \times 0.9 = \$1710$

   The overall percentage discount $= \dfrac{2000-1710}{2000} \times 100\% = 14.5\%$

   (b) When not paying by the credit card,
   the selling price $= 2000 \times (1-5\%) = \$1900$
   The amount that could be saved $= 1900 - 1710 = \$190$

5. (a) The required amount
   $= 200 \times 40\% \times 4 \times 175\% + 200 \times (1-40\%) \times 75\% \times 4 \times 110\%$
   $= \$956$

   (b) The profit percentage $= \dfrac{956-800}{800} \times 100\% = 19.5\%$

6. The selling price $= 1400 \times 130\% \times 70\% = \$1274$

7. (a) let $\$x$ be the marked price,
   $x(10\%) = 880$
   $x = 8800$
   Thus, the marked price is \$8800.

   (b) The cost $= \dfrac{8800-880}{1+10\%} = \$7200$

8. (a) The selling price $= 3500 \times (1 - 30\%) = \$2450$

(b) The cost $= \dfrac{2450}{1 + 12\%} = \$2187.5$

(c) Let $x\%$ be the required percentage discount.

$2187.5 \times (1 + 20\%) = 3500 \times (1 - x\%)$

$2625 = 3500(1 - x\%)$

$0.75 = 1 - x\%$

$x = 25$