Unit 36 Business Formulas

1. **Simple interest:** $I = Prt$

   A. **Interest (I)** is the extra amount earned on an investment (a savings account) or the amount paid to borrow money (a credit card).

   B. **Principal (P)** is the amount invested or borrowed.

   C. **Rate (r)** is the annual (yearly) percent earned or paid on the principal.

   D. **Time (t)** is the number of years of the investment or loan.

   E. Example:

   Find the interest paid on a $200 savings account earning simple interest of 4% for two years.

   > **Unknown:**
   > Interest
   >
   > **Given:**
   > Principal = $200
   > rate = 4%
   > time = 2 years
   >
   > $I = Prt$
   > $= (\$200)(.04)(2)$
   > $= \$16$

2. **Profit:** $P = R - C$

   A. **Profit (P)** is the extra money earned after costs (expenses).

   B. **Revenue (R)** is the money earned for a business activity.

   C. **Cost (C)** is money paid to earn revenue.

   D. Example:

   Find the profit earned by a company which had $700,000 in revenue and $625,000 in costs.

   > **Unknown:**
   > Profit
   >
   > **Given:**
   > Revenue = $700,000
   > Costs = $625,000
   >
   > $P = R - C$
   > $= \$700,000 - \$625,000$
   > $= \$75,000$

3. **Discount:** $D = R - S$

   A. **Discounts (D)** are often given to encourage customers to buy a product.

   B. **Regular price (R)** is the price before the sale.

   C. **Sale price (S)** is the price after discount.

   D. Example:
   A car's list price is $1,795. Its sales price is $1,645. Find the discount.

   > **Unknown:** Discount **Given:** Regular Price = $1,795 and Sales Price = $1,645
   > $D = R - S = \$1,795 - \$1,645 = \$150$

4. **Unit cost:** $U = T/n$

   A. A **number of items (n)** are often combined and sold for a **total price (T)**.

   B. The **cost per unit** is found by dividing the total price by the number of items.

   C. Example:

   Three dress shirts cost $45.39. What is the cost of 1 dress shirt?

   > **Unknown:** unit cost **Given:** 3 cost $45.39
   > Unit price $= \frac{T}{n} = \frac{\$45.39}{3} = \$15.13$