Class 8 Work sheet
Subject teacher- Barkatul alam, Tipu sir

1. **Some principal becomes tk 5000 as profit principal in 5 years and tk.4500 as profit principal in 3 years.**
   a) Write down the formula for simple profit{I}and compound principal{c}
   b) Determine the principal and rate of profit?
   c) In how many years the mentioned principal will be double as profit principal?

2. **If profit-principal of some principal is TK 5500 in 3 years and the profit is $\frac{3}{8}$ parts of the principal.**
   a. Write the formula of profit.
   b. Find the profit.
   c. Find the principal and rate of profit.

3. $\frac{x^2+3x-4}{x^2-7x+12}$, $\frac{x^2-16}{x^2-9}$, $\frac{(x-4)^2}{(x-1)^2}$ are the three expression.
   a. Express the 1st fraction in lowest from.
   b. Divide the 1st fraction by 2nd fraction and multiply the quotient with the 3rd fraction
   c. $\frac{"(x3+y3+3xy(x+y)}{"(x+y)2-4xy} \div \frac{(x-y)2+4x,y}{x3-y3-3xy(x-y)}$ Simplify

4. **$a^3 + 8$, $a-\frac{1}{a}$, $a^4 +\frac{1}{a^4}$ are three algebraic expressions.**
   a. Factorize the first expression.
   b. If $a-\frac{1}{a} = 2$, then find the value of $a^3 - \frac{1}{a^3}$
   c. If $a-\frac{1}{a} = 3$, then show that $a^4 - \frac{1}{a^4} = 119$.

5. **a^2+b^2 and a^6+b^6 are two expressions"**
   a. Now find the value of 2nd expression, while a=-c and b=c
   b. If a+b =6, and a-b=2, find the value of ab ,and a^2+b^2
   c. If $a^2+b^2=c^2$, and c=3, then find the value of the second expression.