## Substitution Worksheet Using Formulas

1) The temperature is 80°F, find the temperature in Celsius given the formula $°C = \frac{5}{9}(°F - 32)$.

2) The temperature is 50°C, find the temperature in Fahrenheit given the formula $°F = \frac{9}{5}°C + 32$

3) Find A if you were given P= 200, r= .35, n=12, and t=8, given the formula: $A = P\left(1 + \frac{r}{n}\right)^{nt}$

4) Find c if a = 5 and b= 8 for the formula $c = \sqrt{a^2 + b^2}$.

5) Solve for F if given $G = 20, m_1 = 18$, $m_2 = 12$, and $d = -4$ for the formula: $F = G\frac{m_1 m_2}{d^2}$

6) Given the formula: $X_{t+1} = K \cdot x_t (1 - x_t)$, find $X_{t+1}$ if $x_t = 15$ and $K = -12$.

7) Given that a=2, b=-8, c=8, use the following formula to simplify: $y = \frac{-b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{2a}$

8) Given that a= -2, b= 4, and c= -4, use the following formula to simplify: $y = \frac{-b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{2a}$