Limit Laws

1. If $\lim\limits_{x \to 5} f(x) = 5$ and $\lim\limits_{x \to 5} (2f(x) - g(x)) = 6$, find $\lim\limits_{x \to 5} g(x)$.

   a. $g(5) = 4$

   b. $g(5) = 5$

   c. $g(5) = 16$

   d. $g(5) = -1$

   e. $g(5) = 6$

2. Find $\lim\limits_{\theta \to 0} \sin(\theta)\theta^3$

3. Find $\lim\limits_{y \to 3} \dfrac{y^3 e^y}{\tan(y)}$

4. If $\lim\limits_{\theta \to 0} \dfrac{\sin(\theta)}{\theta} = 1$, find $\lim\limits_{\theta \to 0} \dfrac{\sin(3\theta)}{\theta}$

5. If $3 \lim\limits_{y \to 4} f(x) + 1 = 8$, find $\lim\limits_{y \to 4} f(x)$