(a) $2 = \lim_{x\to 3} \frac{f(x)}{2x} + \lim_{x\to 3}(1) \Rightarrow 2 = \lim_{x\to 3} \frac{f(x)}{2x} + 1$

$\Rightarrow 1 = \lim_{x\to 3} \frac{f(x)}{2x}$ $\qquad \lim_{x\to 3} 2x = 6 \neq 0$

$1 = \frac{\lim_{x\to 3} f(x)}{\lim_{x\to 3} 2x} \Rightarrow 1 = \frac{\lim_{x\to 3} f(x)}{6} \Rightarrow \boxed{6} = \lim_{x\to 3} f(x)$

(b) $\lim_{x\to 0} \frac{\tan(4x)}{\sin(6x)} = \lim_{x\to 0} \frac{\sin(4x)}{\cos(4x)} \cdot \frac{1}{\sin(6x)}$

$= \lim_{x\to 0} \frac{4}{6} \frac{\sin(4x)}{4x} \cdot \frac{6x}{\sin(6x)} \cdot \frac{1}{\cos(4x)}$

$= \frac{4}{6}\left(\lim_{x\to 0} \frac{\sin(4x)}{4x}\right)\left(\lim_{x\to 0} \frac{6x}{\sin(6x)}\right)\left(\lim_{x\to 0} \frac{1}{\cos(4x)}\right)$

$= \frac{4}{6}(1)(1)(1) = \boxed{\frac{4}{6}}$

(c) $\lim_{x\to\infty} \frac{-2x^3 - 2x + 3}{3x^3 + 3x^2 - 3} = \lim_{x\to\infty} \frac{-2x^3 - 2x + 3}{3x^3 + 3x^2 - 3} \frac{\left(\frac{1}{x^3}\right)}{\left(\frac{1}{x^3}\right)}$

$= \lim_{x\to\infty} \frac{-2 - \frac{2}{x^2} + \frac{3}{x^3}}{3 + \frac{3}{x} - \frac{3}{x^3}}$

$= \frac{\lim_{x\to\infty}\left(-2 - \frac{2}{x^2} + \frac{3}{x^3}\right)}{\lim_{x\to\infty}\left(3 + \frac{3}{x} - \frac{3}{x^3}\right)} = \boxed{\frac{-2}{3}}$