7) a) $5\sqrt{x} - \frac{1}{\sqrt{x}}$

$f(x) = 5x^{\frac{1}{2}} - \frac{1}{\sqrt{x}} \rightarrow 5\left(\frac{1}{2}x^{-1\frac{1}{2}}\right) - \frac{1}{\sqrt{x}} \rightarrow \frac{5x^{-\frac{1}{2}}}{2} \rightarrow \frac{5}{2x^{\frac{1}{2}}}$

$\frac{5x^{-\frac{1}{2}}}{2} - \left(\frac{-1}{x^{\frac{1}{2}}}\right) \rightarrow x^{-\frac{1}{2}\cdot\frac{2}{2}} = \frac{1x^{-\frac{3}{2}}}{2}$

$\frac{5}{2x^{\frac{1}{2}}} + \frac{1}{2x^{\frac{3}{2}}}$

b) $\frac{2x^4+5x^2-3}{x^2} = \frac{x(x(8x^3+10x)}{x^4} = \frac{x(8x^3+10x) - 2(2x^4+5x^2-3)}{x^3}$

$-2 \cdot -3$

$\rightarrow \frac{4x^4+6}{x^3}$

8) a) $25

b) 20,000 gallons

c) 128