$\lim_{x \to 1} \frac{(x-1)(\sqrt{x}+1)}{x-1}$

$6x - 3x^2 + 5$
$-6x + 6$

$x^3 + (-1)^3$

$(x-1)(x$

3) a) $S(1) = 1249.5$
$S(2) = 123.4$

b) $0 = -4.9t^2 + 1254.4$
$t = \pm 16s$

c) $\frac{S(16) - S(15)}{1}$ $\frac{0 - 151.9}{1}$

d) $\lim_{t \to 4} \frac{S(t) - S(4)}{t-4} = \lim_{x \to 4} \frac{-4.9t^2 + 4.9(4)^2 + 1254.4 + 1254.4}{t-4}$

$\lim_{x \to 4} \frac{-4.9(t^2 - 16)}{t-4}$

$\lim_{x \to 4} \frac{-4.9(t-4)(t+4)}{t-4}$

$\lim_{x \to 4} -4.9 \cdot 8$