

Properties of Limits

Recall: Determine the velocity at 4 seconds of an object with position function $s(t) = 10t^2 - 20t$.

Properties of Limits: techniques used to solve limits

1.

2.

3.

4.

5.

6.

7.

Ex. 1 Evaluate the following limits.

a) $\lim_{x \rightarrow 3} 4x^2 - 2x$

b) $\lim_{x \rightarrow 2} 4$

c) $\lim_{x \rightarrow 3} \frac{x^2 - 2x - 3}{x - 3}$

d) $\lim_{x \rightarrow 0} \frac{\sqrt{x+9} - 3}{x}$

e) $\lim_{x \rightarrow 0} \frac{\sqrt{x+4} - 2}{3x}$

f) $\lim_{x \rightarrow 0} \frac{(x+27)^{1/3} - 3}{x}$

g) $\lim_{x \rightarrow 3} \frac{|x-3|}{x-3}$

h) $\lim_{x \rightarrow 2} (3x^2 + 4x - 1)$

i) $\lim_{x \rightarrow -1} \frac{3x^3 - 2x + 1}{4x^2 + 4x - 6}$

