

Limits & Continuity

1.1A – Limits by Tables

A: Complete the tables and use them to find the given limit. Round to 3 decimal places when appropriate.

#1) $\lim_{x \rightarrow 3} (6x - 7)$

x	2.9	2.99	2.999	
$6x - 7$				

	3.001	3.01	3.1	x
				$6x - 7$

#2) $\lim_{x \rightarrow 1} \frac{x^3 - 1}{x - 1}$

x	0.9	0.99	0.999	
$\frac{x^3 - 1}{x - 1}$				

	1.001	1.01	1.1	x
				$\frac{x^3 - 1}{x - 1}$

#3) $\lim_{x \rightarrow 0} (4x + 2)$

x	-0.1	-0.01	-0.001	
$4x + 2$				

	0.001	0.01	0.1	x
				$4x + 2$

#4) $\lim_{x \rightarrow 2} \frac{x^3 - 8}{x - 2}$

x	1.9	1.99	1.999	
$\frac{x^3 - 8}{x - 2}$				

	2.001	2.01	2.1	x
				$\frac{x^3 - 8}{x - 2}$

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B: Find each limit by tables. Round to 3 decimal places when appropriate.

$$\#5) \lim_{x \rightarrow 0} (3x + 1)^{1/x}$$

$$\#6) \lim_{x \rightarrow 3} \frac{\frac{1}{x} - \frac{1}{3}}{x - 3}$$

$$\#7) \lim_{x \rightarrow 0} (2 - x)^{1/x}$$

$$\#8) \lim_{x \rightarrow 2} \frac{\sqrt{x} - 2}{x - 2}$$