



Limits Graphically
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I. Based on the graph find the following limits.

a) $\lim_{x \rightarrow -3^+} f(x) = 3$

b) $\lim_{x \rightarrow -3^-} f(x) = 3$

c) $\lim_{x \rightarrow 3} f(x) = 3$

d) $\lim_{x \rightarrow 1^+} f(x) = 2$

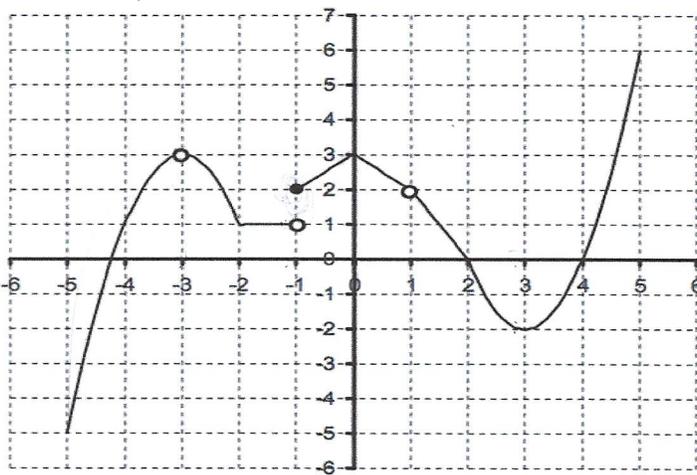
e) $\lim_{x \rightarrow 1^-} f(x) = 2$

f) $\lim_{x \rightarrow 1} f(x) = 2$

g) $\lim_{x \rightarrow 3^+} f(x) = -2$

h) $\lim_{x \rightarrow 3^-} f(x) = -2$

i) $\lim_{x \rightarrow 3} f(x) = -2$



j) $\lim_{x \rightarrow -1^+} f(x) = 2$

k) $\lim_{x \rightarrow -1^-} f(x) = 1$

l) $\lim_{x \rightarrow 1} f(x) = 2$

$f(-1) = 2$

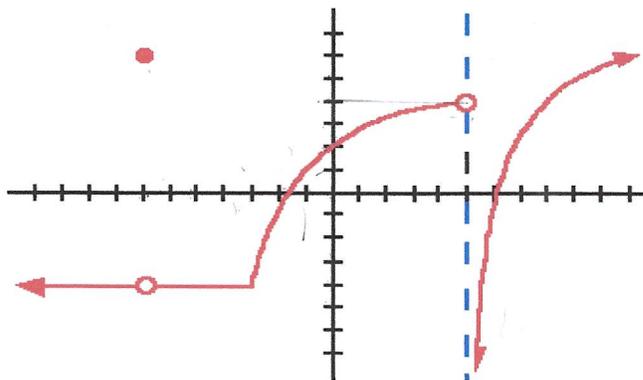
$f(1) = \cancel{2}$

$f(-3) = \cancel{3}$

$f(2) = 0$

$f(3) = -2$

II. Given this graph of $f(x)$ answer the following:



limits = lines tendency

1) $f(5) = \cancel{2}$

2) $f(-7) = 6$

3) $\lim_{x \rightarrow 0^-} [f(x)] = 2$

4) $\lim_{x \rightarrow 0^+} [f(x)] = 2$

5) $\lim_{x \rightarrow 0} [f(x)] = 2$ $f(0) = 2$

6) $\lim_{x \rightarrow -7} [f(x)] = -4$

7) $\lim_{x \rightarrow -7^+} [f(x)] = -4$

8) $\lim_{x \rightarrow -7} [f(x)] = -4$ $f(7) = 6$

9) $\lim_{x \rightarrow 5^-} [f(x)] = 4$

10) $\lim_{x \rightarrow 5^+} [f(x)] = -\infty$

11) $\lim_{x \rightarrow 5} [f(x)] = \cancel{2}$ $f(5) = \cancel{2}$