

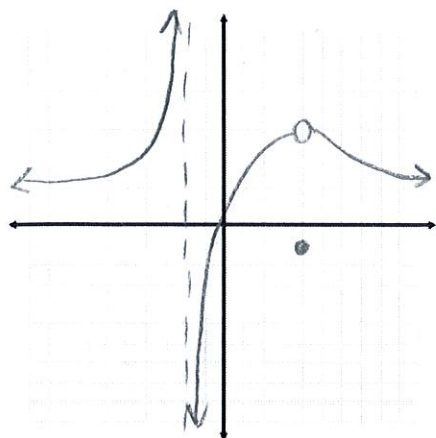
1) Sketch a graph with the following characteristics:

$\lim_{x \rightarrow 0^+} f(x) = 3 \checkmark$ $\lim_{x \rightarrow 0^-} f(x) = -5 \checkmark$ $f(0)$ is undefined \checkmark

$\lim_{x \rightarrow 5^+} f(x) = \infty \checkmark$ $\lim_{x \rightarrow -\infty} f(x) = 0 \checkmark$

Then identify any discontinuities, at what x-values they occur, and what type they are.

infinite @ x=5
jump @ x=0



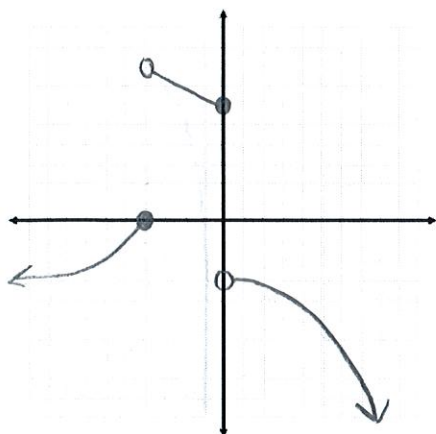
2) Sketch a graph with the following characteristics:

$\lim_{x \rightarrow -2^+} g(x) = -\infty \checkmark$ $\lim_{x \rightarrow -2^-} g(x) = \infty \checkmark$ $\lim_{x \rightarrow \pm\infty} g(x) = 2 \checkmark$

$\lim_{x \rightarrow 4} g(x) = 5 \checkmark$ $g(4) = -1 \checkmark$

Then identify any discontinuities, at what x-values they occur, and what type they are.

infinite @ x=-2
removable @ x=4



3) Sketch a graph with the following characteristics:

$\lim_{x \rightarrow 0^+} f(x) = -3 \checkmark$ $\lim_{x \rightarrow 0} f(x) = DNE$ $f(0) = 6 \checkmark$

$\lim_{x \rightarrow -4^+} f(x) = 8 \checkmark$ $\lim_{x \rightarrow -4^-} f(x) = 0 \checkmark$ $\lim_{x \rightarrow \infty} f(x) = -\infty \checkmark$

$\lim_{x \rightarrow -\infty} f(x) = -3 \checkmark$

Then identify any discontinuities, at what x-values they occur, and what type they are.

jump @ x=-4, 0