1. Write as a single logarithm.

   $4\log(b+4) - 3\log(z)$

   $\log(b+4)^4 - \log(z^3)$

   $\log\left(\dfrac{(b+4)^4}{z^3}\right)$
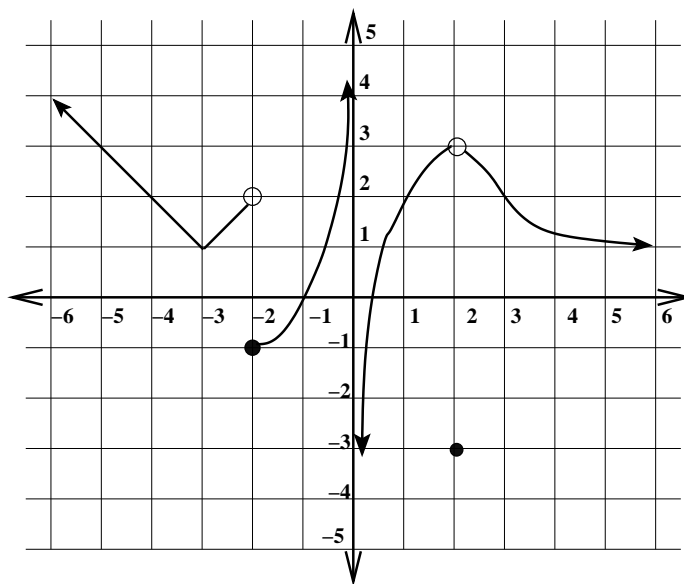
2. Use the graph of $f(x)$ to evaluate these limits:

   a) $\displaystyle\lim_{x\to 0^+} f(x) = -\infty$

   b) $\displaystyle\lim_{x\to 3} f(x) = 2$

   c) $\displaystyle\lim_{x\to -\infty} f(x) = \infty$

   d) $\displaystyle\lim_{x\to -2} f(x) = DNE$

3. Evaluate $\displaystyle\lim_{x\to 5}\frac{x^2-2x-15}{x^3-5x^2} = \lim_{x\to 5}\frac{x+3}{x^2} = \frac{8}{25} = 0.32$