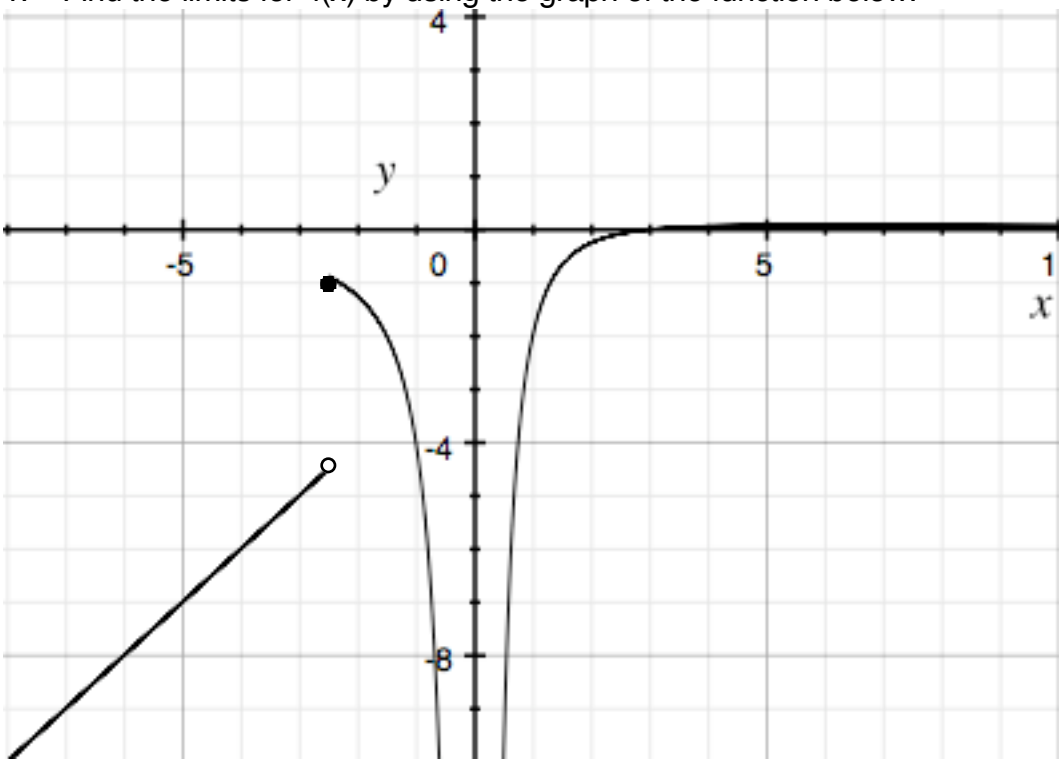
Practice Problems

1. Find the limits for f(x) by using the graph of the function below.



a) $\lim_{x \to \infty} f(x) =$ **∞**

b) $\lim_{x \to -\infty} f(x) =$ **-∞**

c) $\lim_{x \to -2.5+} f(x) =$ **-1**

d) $\lim_{x \to -2.5^-} f(x) =$ **-4.25**

e) $\lim_{x \to -2.5} f(x) =$ **D.N.E.**

f) f(-2.5) = **-1**

g) $\lim_{x \to 0-} f(x) =$ **-∞**

h) $\lim_{x \to 0+} f(x) =$ -∞

i) $\lim_{x \to 0} f(x) =$ -∞

2. Divide by the highest power to prove your answer for the limit given:

$$\lim_{x \to \infty} \frac{x^4 - 3x^2 + 18}{10x^3 + 5x^2}$$

The highest power is x^4. The limit approaches ∞.