

Additional Questions for Homework on Section 2.6.

For problems A through C, find all vertical and horizontal asymptotes and all removable discontinuities.

A. $f(x) = \frac{x^2-9}{x^2-8x+15}$

B. $g(x) = \frac{\sqrt{4x^2+9}}{3x+10}$

C. $h(x) = \frac{5e^x}{4+e^x}$

For problems D through J, find the following limits.

D. $\lim_{x \rightarrow \infty} (17 + e^{-x})$

E. $\lim_{x \rightarrow \infty} ((0.5)^x + \ln x)$

F. $\lim_{x \rightarrow \infty} (17 - 3 \ln x)$

G. $\lim_{x \rightarrow -\infty} (2^x - 3^x)$

H. $\lim_{x \rightarrow \infty} (2^x - 3^x)$

I. $\lim_{x \rightarrow \infty} \frac{3-2e^x}{10+7e^x}$

J. $\lim_{x \rightarrow -\infty} \frac{3 \cdot 2^x + (0.5)^x}{7 \cdot 2^x - 4(0.5)^x}$