

2.1. Definition of Limits

Section 2.1 Exercises, pg. 65

25¹, 29¹, 34¹, 43, 45, 46, 48, 58, 65², 67²

Section 2.2 Exercises, pg. 76

13, 14, 19

2.2. Limits Involving Infinity

Section 2.2 Exercises, pg. 76

5, 9², 21, 27(a), 30(a), 41(b), 42(b)*2.2. End-Behavior Functions of Rational Functions*

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43, 44

2.2. Relative Sizes of e^x , x^2 and $\ln x$

Supplemental Problems:

1, 2

Section 2.2 Exercises, pg. 76

3, 45, 46, 69³, 70³**Notes:**

1. Just use algebra.
2. No need to graph or to use the Squeeze Theorem.
3. Use properties of logarithms.

Supplemental Problems:For problems **1** and **2**, calculate the indicated limits.**1) a) b)**

$$\lim_{x \rightarrow \infty} \frac{7^x}{x^2} \qquad \lim_{x \rightarrow \infty} \frac{x^2}{7^x}$$

c) d)

$$\lim_{x \rightarrow \infty} \frac{2^x}{\log x} \qquad \lim_{x \rightarrow \infty} \frac{\log x}{2^x}$$

2) a)

$$\lim_{x \rightarrow \infty} (\log x - \sqrt{|x|})$$

b)

$$\lim_{x \rightarrow \infty} (1.1^x - x^{99})$$