

Compute these limits.

$$1. \lim_{x \rightarrow \infty} -3x^4 + 7x^3 + 6 =$$

$$2. \lim_{x \rightarrow -\infty} -3x^4 + 7x^3 + 6 =$$

$$3. \lim_{x \rightarrow \infty} -6x^9 - 7x^6 + 2 =$$

$$4. \lim_{x \rightarrow -\infty} -6x^9 - 7x^6 + 2 =$$

$$5. \lim_{x \rightarrow \infty} \frac{6x^3 - 5x^2 + 1}{3x + 7} =$$

$$6. \lim_{x \rightarrow \infty} \frac{-3x^5 + 7x^2 + 7}{2x^2 + 5} =$$

$$7. \lim_{x \rightarrow -\infty} \frac{-3x^5 + 7x^2 + 7}{2x^2 + 5} =$$

$$8. \lim_{x \rightarrow -\infty} \frac{-3x^7 - 4x^3 + 7}{x^3 + 10} =$$

$$9. \lim_{x \rightarrow \infty} 4 * (.75)^x =$$

$$10. \lim_{x \rightarrow -\infty} 4 * (.75)^x =$$

$$11. \lim_{x \rightarrow \infty} 5e^{2x} =$$

$$12. \lim_{x \rightarrow -\infty} 5e^{2x} =$$

$$13. \lim_{x \rightarrow \infty} f(x), \text{ where } f(x) = \begin{cases} \frac{3x^2 + 5x + 4}{4x^2 + 7} & \text{if } x \leq 1 \\ e^{-.5x} & \text{if } x > 1 \end{cases}$$

$$14. \lim_{x \rightarrow -\infty} f(x), \text{ where } f(x) = \begin{cases} \frac{3x^2 + 5x + 4}{4x^2 + 7} & \text{if } x \leq 1 \\ e^{-.5x} & \text{if } x > 1 \end{cases}$$

$$15. \lim_{x \rightarrow \infty} f(x), \text{ where } f(x) = \begin{cases} 4 * (1.05)^x & \text{if } x < 0 \\ \frac{6x^4 + 18}{5x^2 + 2} & \text{if } x \geq 0 \end{cases}$$

$$16. \lim_{x \rightarrow -\infty} f(x), \quad \text{where}$$

$$f(x) = \begin{cases} 4 * (1.05)^x & \text{if } x < 0 \\ \frac{6x^4 + 18}{5x^2 + 2} & \text{if } x \geq 0 \end{cases}$$