

Section 1.2 Limits part 2 (Minimum homework: 1 – 29 odds, 33, 35, 37)

#1-20: Find the following limits using Algebra.

1) $\lim_{x \rightarrow 5} (2x + 6)$

2) $\lim_{x \rightarrow -3} (5x - 7)$

3) $\lim_{x \rightarrow 3} (x^2 + 5x - 4)$

4) $\lim_{x \rightarrow 2} (x^2 - 3x - 7)$

5) $\lim_{x \rightarrow 4} \sqrt{x + 5}$

6) $\lim_{x \rightarrow -3} \sqrt{2x + 10}$

7) $\lim_{x \rightarrow 2} \frac{3x+6}{x-5}$

8) $\lim_{x \rightarrow 4} \frac{2x+1}{x+7}$

9) $\lim_{x \rightarrow -2} \frac{x^2+5x+6}{x^2+3x+2}$

10) $\lim_{x \rightarrow 1} \frac{x^2+4x-5}{x^2-1}$

11) $\lim_{x \rightarrow 3} \frac{x^2-9}{x^2-4x+3}$

12) $\lim_{x \rightarrow 2} \frac{x^2-4}{x^2-3x+2}$

13) $\lim_{x \rightarrow 2} \frac{2x^2-3x-2}{3x^2-2x-8}$

14) $\lim_{x \rightarrow 3} \frac{2x^2-7x+3}{3x^2-7x-6}$

15) $\lim_{x \rightarrow 16} \frac{\sqrt{x}-4}{x-16}$

16) $\lim_{x \rightarrow 49} \frac{\sqrt{x}-7}{x-49}$

17) $\lim_{x \rightarrow 36} \frac{\sqrt{x}-6}{x-36}$

18) $\lim_{x \rightarrow 64} \frac{\sqrt{x}-8}{x-64}$

19) $\lim_{x \rightarrow 121} \frac{\sqrt{x}-11}{x-121}$

20) $\lim_{x \rightarrow 25} \frac{\sqrt{x}-5}{x-25}$

#21-32: Find the following limits using Algebra.

$$21) \lim_{x \rightarrow \infty} \frac{3x+6}{2x-4}$$

$$22) \lim_{x \rightarrow \infty} \frac{3x+1}{5x-4}$$

$$23) \lim_{x \rightarrow \infty} \frac{4x^2-3x+6}{5x^2+2x-4}$$

$$24) \lim_{x \rightarrow \infty} \frac{3x^2+2x-5}{7x^2+4x-2}$$

$$25) \lim_{x \rightarrow \infty} \frac{3x+6}{2x^2-4}$$

$$26) \lim_{x \rightarrow \infty} \frac{3x+1}{5x^2-4}$$

$$27) \lim_{x \rightarrow \infty} \frac{4x^2-3x+6}{5x^3+2x-4}$$

$$28) \lim_{x \rightarrow \infty} \frac{3x^2+2x-5}{7x^3+4x-2}$$

$$29) \lim_{x \rightarrow \infty} \frac{3x^2+6}{2x-4}$$

$$30) \lim_{x \rightarrow \infty} \frac{3x^2+1}{5x-4}$$

$$31) \lim_{x \rightarrow \infty} \frac{4x^3-3x+6}{5x^2+2x-4}$$

$$32) \lim_{x \rightarrow \infty} \frac{3x^3+2x-5}{7x^2+4x-2}$$

#33-40: Find the following limits using Algebra.

$$33) \lim_{x \rightarrow \infty} (2x + 6)$$

$$34) \lim_{x \rightarrow \infty} (5x - 7)$$

$$35) \lim_{x \rightarrow \infty} (-2x + 6)$$

$$36) \lim_{x \rightarrow \infty} (-5x - 7)$$

$$37) \lim_{x \rightarrow \infty} (4x^2 + 5x - 4)$$

$$38) \lim_{x \rightarrow \infty} (2x^2 - 3x - 7)$$

$$39) \lim_{x \rightarrow \infty} (-4x^2 + 5x - 4)$$

$$40) \lim_{x \rightarrow \infty} (-2x^2 - 3x - 7)$$