The first 6 are designed to take 1 minute. These are problems you can solve by inspection.

1) $\lim\limits_{x \to \infty} x =$ _____

2) $\lim\limits_{x \to \infty} \dfrac{1}{x} =$ _____

3) $\lim\limits_{x \to \infty} \dfrac{x^2}{x} =$ _____

4) $\lim\limits_{x \to \infty} \dfrac{x}{x^2} =$ _____

5) $\lim\limits_{x \to \infty} \dfrac{x^4}{x^2} =$ _____

6) $\lim\limits_{x \to \infty} \dfrac{x^3}{x^4} =$ _____

These next 6 have the same power in the numerator and denominator.

7) $\lim\limits_{x \to \infty} \dfrac{x+5}{2x-5} =$ _____

8) $\lim\limits_{x \to \infty} \dfrac{x+10}{x+1,000} =$ _____

9) $\lim\limits_{x \to \infty} \dfrac{2x^2}{(x+1)(x-1)} =$ _____

10) $\lim\limits_{x \to \infty} \dfrac{100x^2}{5x^2} =$ _____

11) $\lim\limits_{x \to \infty} \dfrac{x^4+100x^3}{4x^4+3x^3} =$ _____

12) $\lim\limits_{x \to \infty} \dfrac{32x^3}{x^3-64} =$ _____

These 4 questions have the ln and *e* rules.

13) $\lim\limits_{x \to \infty+} e^x =$ _____

14) $\lim\limits_{x \to \infty+} \ln x =$ _____

15) $\lim\limits_{x \to \infty-} e^x =$ _____

16) $\lim\limits_{x \to \infty-} \ln x =$ _____