1. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 5}(4x^2 + 3x - 9)$
2. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 3}(x^3 - 2x^2 + 3x - 5)$
3. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to -1}(x^5 - x^4 - 2x^3 + 4x - 3)$
4. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 0} x \sin \frac{1}{x}$
5. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 2} \frac{x^2 - 4}{x^5 - 32}$
6. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{t\to 3}(t^2 + 3t + a)$ (a is a constant)
7. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 2} \frac{4x - 1}{x - 1}$
8. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to -3} \frac{x^2 - 6}{3x - 7}$
9. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{t\to -\frac{1}{2}} \frac{t - 1}{t + 1}$
10. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{y\to 1} \frac{y^2 - 3y + 2}{3y^2 - 4y + 1}$
11. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{p\to 0}(p^3 + 3p^2)$
12. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{r\to 5} \frac{r + 3}{r - 1}$
13. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 6} \sqrt{x + 10}$
14. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{t\to -1} \frac{1}{\sqrt[4]{17 + t}}$
15. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 4} \frac{x^2 - 1}{\sqrt{x + 5}}$
16. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 1} \frac{x^2 + 1}{\sqrt[5]{x}}$
17. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 0} x \sin x$
18. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 2}(mx + b)$ where m and b are

constants. (Be sure to take care of all possible cases.)

19. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 1}(ax^2 + bx + c)$ where a, b and c are constants. (Be sure to take care of all possible cases.)

20. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to 1} \frac{a}{x}$ where a is a constant.

21. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{x\to a}(x^2 + 3x + 7)$ where a is a constant.

22. Compute the limit and use the ϵ-δ definition of limit to prove your answer is correct. $\lim_{\theta\to 0}(\tan(\theta) + 2)$

23. Prove that if $\lim_{x\to 2} f(x) = 3$, then $\lim_{x\to 2}(4f(x)) = 12$.

24. Prove that if $\lim_{x\to 2} f(x) = 3$ and $\lim_{x\to 2} g(x) = 2$, then $\lim_{x\to 2}(f(x) + g(x)) = 5$.