Name________________________

1. $\lim_{x\to 3} 5 = \boxed{5}$

2. $\lim_{x\to 7} x = \boxed{7}$

3. $\lim_{x\to 8} \sqrt[3]{x} = \boxed{2}$

4. $\lim_{x\to 8} \log_2 x = \boxed{3}$

5. $\operatorname{Lim}_{x\to 0} e^x = \boxed{1}$

6. $\lim_{x\to 2} \frac{4}{x+3} = \boxed{\frac{4}{5}}$

7. $\lim_{x\to 2} \frac{x-2}{x+3} = \frac{0}{5} = \boxed{0}$

8. $\lim_{x\to 5^-} \frac{3}{x-5} = \boxed{-\infty}$

9. $\lim_{x\to 5^+} \frac{3}{x-5} = \boxed{+\infty}$

10. $\lim_{x\to 5} \frac{3}{x-5} = \boxed{\text{does not exist}}$

11. $\lim_{x\to 5^-} \frac{x}{(x-5)^2} = \boxed{+\infty}$

12. $\lim_{x\to 5^+} \frac{x}{(x-5)^2} \boxed{+\infty}$

13. $\lim_{x\to 5} \frac{x}{(x-5)^2} = \boxed{+\infty}$

14. $\lim_{x\to 2} \frac{2x^2+x-1}{x^2-1} = \boxed{3}$

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15. $\lim_{x\to 0.5} \frac{2x^2+x-1}{x^2-1} = \frac{0}{-3/4} = \boxed{0}$

16. $\lim_{x\to -1} \frac{2x^2+x-1}{x^2-1} = \lim_{x\to -1} \frac{(x+1)(2x-1)}{(x+1)(x-1)} = \lim_{x\to -1} \frac{2x-1}{x-1} = \boxed{\frac{3}{2}}$

17. $\lim_{x\to 2} \frac{x-2}{\sqrt{x+7}-3} = \lim_{x\to 2} \left(\frac{x-2}{\sqrt{x+7}-3}\right)\left(\frac{\sqrt{x+7}+3}{\sqrt{x+7}+3}\right) =$

$\lim_{x\to 2} \frac{(x-2)\left(\sqrt{x+7}+3\right)}{\left(\sqrt{x+7}\right)^2-3\sqrt{x+7}+3\sqrt{x+7}-9} = \lim_{x\to 2} \frac{(x-2)\left(\sqrt{x+7}+3\right)}{x-2} =$

$\lim_{x\to 2} \sqrt{x+7}+3 = \boxed{6}$

18. $\lim_{x\to 5} \frac{\sqrt{x+11}-4}{x^2-25} = \lim_{x\to 5} \left(\frac{\sqrt{x+11}-4}{x^2-25}\right)\left(\frac{\sqrt{x+11}+4}{\sqrt{x+11}+4}\right) =$

$\lim_{x\to 5} \frac{\left(\sqrt{x+11}\right)^2-4\sqrt{x+11}+4\sqrt{x+11}-16}{(x-5)(x+5)\left(\sqrt{x+11}+4\right)} = \lim_{x\to 5} \frac{x-5}{(x-5)(x+5)\left(\sqrt{x+11}+4\right)} =$

$\lim_{x\to 5} \frac{1}{(x+5)\left(\sqrt{x+11}+4\right)} = \boxed{\frac{1}{80}}$

19. $\lim_{x\to 0^+} \ln x = \boxed{-\infty}$

20. $\lim_{x\to +\infty} \ln x = \boxed{+\infty}$