

No calculators will be allowed and no partial credit will be given.

1. Evaluate the limit $\lim_{x \rightarrow -1} \frac{x^2 + 2x + 2}{x + 4}$. Express your answer in simplified form.
2. Evaluate the limit $\lim_{x \rightarrow -1} \frac{5x + 2}{2 - 3x}$. Express your answer in simplified form.
3. Evaluate the limit $\lim_{x \rightarrow 5} \frac{x^2 - 2x - 15}{x - 5}$. Express your answer in simplified form.
4. Evaluate the limit $\lim_{h \rightarrow 0} \frac{(h + 5)^2 - 25}{h}$. Express your answer in simplified form.
5. Find the value of $\lim_{x \rightarrow 3} \frac{x^2 - 9}{5x - 15}$. Express your answer in simplified form.
6. Find the value of $\lim_{x \rightarrow 3^+} (\ln(x^2 - 9) - \ln(5x - 15))$. Express your answer in simplified form.
7. Find the value of $\lim_{x \rightarrow 3} \left(e^{\frac{1}{(5x-15)}} \right)^{(x^2-9)}$. Express your answer in simplified form.
8. Evaluate the limit $\lim_{t \rightarrow 25} \frac{25 - t}{5 - \sqrt{t}}$. Express your answer in simplified form.

1. $\frac{1}{3}$

2. $-\frac{3}{5}$

3. 8

4. 10

5. $\frac{6}{5}$

6. $\ln(6/5)$

7. $e^{\frac{6}{5}}$

8. 10