

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

1. Evaluate the limit $\lim_{x \rightarrow -1} \frac{x^2 + 2x + 1}{x - 3}$. Express your answer in simplified form.
2. Evaluate the limit $\lim_{x \rightarrow -1} \frac{6x + 2}{7 - 3x}$. Express your answer in simplified form.
3. Evaluate the limit $\lim_{x \rightarrow 4} \frac{x^2 - 5x + 4}{x - 4}$. Express your answer in simplified form.
4. Evaluate the limit $\lim_{h \rightarrow 0} \frac{(h + 2)^2 - 4}{h}$. Express your answer in simplified form.
5. Find the value of $\lim_{x \rightarrow 3} \frac{5x^2 - 45}{x - 3}$. Express your answer in simplified form.
6. Find the value of $\lim_{x \rightarrow 3^+} (\ln(4x^2 - 36) - \ln(x - 3))$. Express your answer in simplified form.
7. Find the value of $\lim_{x \rightarrow 3} \left(e^{\frac{1}{(x-3)}} \right)^{(5x^2-45)}$. Express your answer in simplified form.
8. Evaluate the limit $\lim_{t \rightarrow 4} \frac{4 - t}{2 - \sqrt{t}}$. Express your answer in simplified form.

1. 0

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

3. 3

4. 4

5. 30

6. $\ln(24)$

7. e^{30}

8. 4