

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

1. Evaluate the limit $\lim_{x \rightarrow -1} \frac{x^2 + 2x + 4}{x - 3}$. 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 $\lim_{x \rightarrow 4} \frac{x^2 - 3x - 4}{x - 4}$. Express your answer in simplified form.
4. Evaluate the limit $\lim_{t \rightarrow 0} \frac{(t + 3)^2 - 9}{t}$. Express your answer in simplified form.
5. Find the value of $\lim_{x \rightarrow 5} \frac{4x^2 - 100}{x - 5}$. Express your answer in simplified form.
6. Find the value of $\lim_{x \rightarrow 4^+} (\ln(2x^2 - 32) - \ln(x - 4))$. Express your answer in simplified form.
7. Find the value of $\lim_{x \rightarrow 5} \left(e^{\frac{1}{(x-5)}} \right)^{(4x^2-100)}$. Express your answer in simplified form.
8. Evaluate the limit $\lim_{t \rightarrow 9} \frac{9 - t}{3 - \sqrt{t}}$. Express your answer in simplified form.

1. $-\frac{3}{4}$
2. $-\frac{4}{5}$
3. 5
4. 6
5. 40
6. $\ln(16)$
7. e^{40}
8. 6