1.   True or False?

$$\lim_{x \to 3} \frac{x^2 - 9}{x - 3} = 6.$$

2. True or False?

$$\lim_{x \to \infty} \frac{x^2 + 3x + 2}{e^x - \ln x} = 0.$$

3. True or False?

$$\lim_{x \to 0^+} x^2 \ln(x) = 0.$$

4. What is $\lim\limits_{x \to 0} \dfrac{e^x}{e^x - 1}$?

(A) 0

(B) 1

(C) ∞

(D) None of the above

5.   What is $\lim_{x \to 0} (x+1)^{1/x}$?

(A) 0

(B) 1

(C) The limit doesn't exist

(D) None of the above

6. What is $\lim\limits_{x \to 0} x^{\sin x}$?

(A) 0

(B) 1

(C) The limit doesn't exist

(D) None of the above

7. True or False?

$f(x) = x^2$ has infinitely many antiderivatives.

8. What is $\displaystyle\int \frac{1}{\sqrt{x}}\,dx$?

(A) $\sqrt{x} + C$

(B) $2\sqrt{x} + C$

(C) $x^{-3/2} + C$

(D) None of the above