

10 Lecture - MTH101

Important Mcqs

1. What is the limit of the function $f(x) = 3x + 1$ as x approaches 2?

- a) 7
- b) 8
- c) 9
- d) 10

Answer: b) 8

2. What is the limit of the function $f(x) = (x^2 - 9)/(x - 3)$ as x approaches 3?

- a) 6
- b) 7
- c) 8
- d) 9

Answer: d) 9

3. What is the limit of the function $f(x) = (2x - 3)/(x + 1)$ as x approaches -1?

- a) -2
- b) -1
- c) 0
- d) 1

Answer: a) -2

4. What is the limit of the function $f(x) = \sin(x)/x$ as x approaches 0?

- a) 0
- b) 1
- c) pi
- d) infinity

Answer: b) 1

5. What is the limit of the function $f(x) = (x^3 - 8)/(x - 2)$ as x approaches 2?

- a) 0
- b) 1
- c) 2
- d) infinity

Answer: c) 2

6. What is the limit of the function $f(x) = e^{(2x)}$ as x approaches infinity?

- a) 0
- b) 1
- c) infinity
- d) -infinity

Answer: c) infinity

7. What is the limit of the function $f(x) = \frac{(x^2 + 2x - 3)}{(x^2 - 4)}$ as x approaches 2?

- a) 0
- b) $\frac{1}{4}$
- c) $\frac{1}{2}$
- d) 1

Answer: c) $\frac{1}{2}$

8. What is the limit of the function $f(x) = \frac{(x - 1)^3}{(x^2 - x - 2)}$ as x approaches 2?

- a) -infinity
- b) -1
- c) 0
- d) infinity

Answer: b) -1

9. What is the limit of the function $f(x) = \frac{1}{(x - 2)^2}$ as x approaches 2?

- a) 0
- b) 1
- c) infinity
- d) -infinity

Answer: c) infinity

10. What is the limit of the function $f(x) = \frac{\ln(x + 1)}{x}$ as x approaches 0?

- a) 0
- b) 1
- c) e
- d) infinity

Answer: b) 1