## 10 Lecture - MTH101

## Important Mcqs

1. What is the limit of the function $f(x)=3 x+1$ as $x$ approaches 2 ?
a) 7
b) 8
c) 9
d) 10

Answer: b) 8
2. What is the limit of the function $f(x)=\left(x^{\wedge} 2-9\right) /(x-3)$ as $x$ approaches 3 ?
a) 6
b) 7
c) 8
d) 9

Answer: d) 9
3. What is the limit of the function $f(x)=(2 x-3) /(x+1)$ 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 $f(x)=\left(x^{\wedge} 3-8\right) /(x-2)$ as $x$ approaches 2 ?
a) 0
b) 1
c) 2
d) infinity

## Answer: c) 2

6. What is the limit of the function $f(x)=e^{\wedge}(2 x)$ as $x$ approaches infinity?
a) 0
b) 1
c) infinity
d) -infinity

Answer: c) infinity
7. What is the limit of the function $f(x)=\left(x^{\wedge} 2+2 x-3\right) /\left(x^{\wedge} 2-4\right)$ as $x$ approaches 2 ?
a) 0
b) $1 / 4$
c) $1 / 2$
d) 1

Answer: c) 1/2
8. What is the limit of the function $f(x)=(x-1)^{\wedge} 3 /\left(x^{\wedge} 2-x-2\right)$ as $x$ approaches 2 ?
a) -infinity
b) -1
c) 0
d) infinity

Answer: b) -1
9. What is the limit of the function $f(x)=1 /(x-2)^{\wedge} 2$ as $x$ approaches 2 ?
a) 0
b) 1
c) infinity
d) -infinity

Answer: c) infinity
10. What is the limit of the function $f(x)=\ln (x+1) / x$ as $x$ approaches 0 ?
a) 0
b) 1
c) e
d) infinity

Answer: b) 1

