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MTH102
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1. What is the value of the limit $\lim_{x \rightarrow 0} \frac{x^2 - x - 2}{x^2 - 2x}$

-2

1

--->> Doesnot exist

∞

2. Which of the following equations define y as a function of x ?

$y^2 + x^2 = 1$

$y^2 + x = 1$

$2y^2 - 3x^2 = 0$

--->> $x + y = 1$

3. If two functions agree at all but a single point c (i.e. $x = c$), then they have?

Constant limit

Removable limit

Limited limit

--->> Identical limit

4. Find the value of $f(x) = x^2 - 5x + 1$ when $x = 4$

-2

5

1

--->> -3

5. If a discontinuity function f can be made continuous by appropriately redefining $f(c)$ is called?

--->> Removable

Constant

Non-removable

Non-constant

6. If A and B are non-empty sets in the function $f: A \rightarrow B$, the set B is called

Equal of the function

---> Codomain of the function

Image of the function

Conclusion of the function

7. Discuss the continuity of $f(x) = \sqrt{3-x}$

$x > 3$

---> $x < 3$

$x \leq 3$

$x \geq 3$

8. If to each value of the dependent variable in the range there is corresponding exactly one value of the independent variable, the function is called?

Bijection

Injection

---> One to one

Composite

9. Evaluate $\lim_{x \rightarrow \infty} \frac{2x^3 + 5x^2 - 3x + 1}{6x^3 - x + 5}$

---> $\frac{1}{3}$

$\frac{2}{3}$

$\frac{7}{3}$

1

10. Find the inverse relationship of the function $y = 2x + 5$

$x = 2y - 5$

$x = 2 + \frac{5}{y}$

---> $x = \frac{1}{2}(y - 5)$

$$\backslash (x=2y+5\backslash)$$