

Chapter 5 Class 12 - Continuity & Differentiability - Assertion and Reasoning Worksheet 2 by *teachoo*

Chapter: [Chapter 5 Class 12 - Continuity & Differentiability](#)

Name: _____

School: _____

Roll Number: _____

Instructions:

For each question, two statements are given: Assertion (A) and Reason (R). Choose the correct option.

- (a) Both A and R are true, and R is the correct explanation of A.
- (b) Both A and R are true, but R is not the correct explanation of A.
- (c) A is true, but R is false.
- (d) A is false, but R is true.

- 1 Assertion (A): The function $f(x) = \sin(x^2)$ is a continuous function.
Reason (R): The composition of two continuous functions is a continuous function.
- 2 Assertion (A): The function $f(x) = [x]$ has a jump discontinuity at every integer.
Reason (R): The left-hand limit and the right-hand limit at any integer are not equal.
- 3 Assertion (A): If a car moves with constant velocity, its acceleration is zero.
Reason (R): Acceleration is the second derivative of the position function, and the derivative of a constant (velocity) is zero.
- 4 Assertion (A): The function $f(x) = x^3$ is differentiable everywhere.
Reason (R): The graph of $y = x^3$ is smooth and has no sharp corners or breaks.
- 5 Assertion (A): The function $f(x) = \frac{x^2-4}{x-2}$ is not continuous at $x = 2$.
Reason (R): The function is not defined at $x = 2$.

Important links

- Answer of this worksheet - <https://www.teachoo.com/25577/5354/Assertion-Reasoning---Worksheet-2/category/Teachoo-Questions---Assertion-Reasoning/>
- Full Chapter with Explanation, Activity, Worksheets and more – <https://www.teachoo.com/subjects/cbse-maths/class-12th/>
- Maths Class 12 - <https://www.teachoo.com/subjects/cbse-maths/class-12th/>

For more worksheets, ad-free videos and Sample Papers – subscribe to

Teachoo Black here - <https://www.teachoo.com/black/>