Edulyte

AREA UNDER THE CURVE FORMULA

Calculating the area under the curve is when you calculate the area between a curve and the -axis. It is the calculation of the area above the -axis or entirely below the -axis, or it also might be the combination of above and below the -axis.

Read more

Q1: Which mathematical concept is commonly used to find the area under a curve?

A: Derivative
B: Integral
C: Equation
D: Gradient

Q2: What is the area under a curve that lies entirely above the x-axis?

A: Positive
B: Negative
C: Zero
D: Undefined

Q3: Which of the following represents the formula for the area under a curve between two points, a and b?

A: ∫[a, b] f(x) dx
B: ∫[0, b] f(a) da
C: ∫[0, b] f(x) dx
D: ∫[a, b] f(a) dx

Q4: What is the area under a curve that lies entirely below the x-axis?

A: Positive
B: Zero
C: Undefined
D: Negative

Q5: What is the Trapezoidal Formula?

A: b∫a dx
B: b∫a f(x)
C: b∫a f(x) dx
D: B∫a

Q6: What is the Simpson's Formula?

A: $\int_a^b f(x)dx \approx h^3[f(x_0)+f(x_n)+4\times(f(x_1)+f(x_3)+\ldots) + 2\times(f(x_2)+f(x_4)+\ldots)]$
B: $\int_a^b f(x)dx$
C: $2\times(f(x_2)+f(x_4)+\ldots)$

Q7: What are the methods of calculating the area under the curve?

A: Trapezoidal rule
B: Simpson's rule
C: Definite integral rule
D: All of these

Q8: Which Axis focuses on calculating the Area under the Curve?

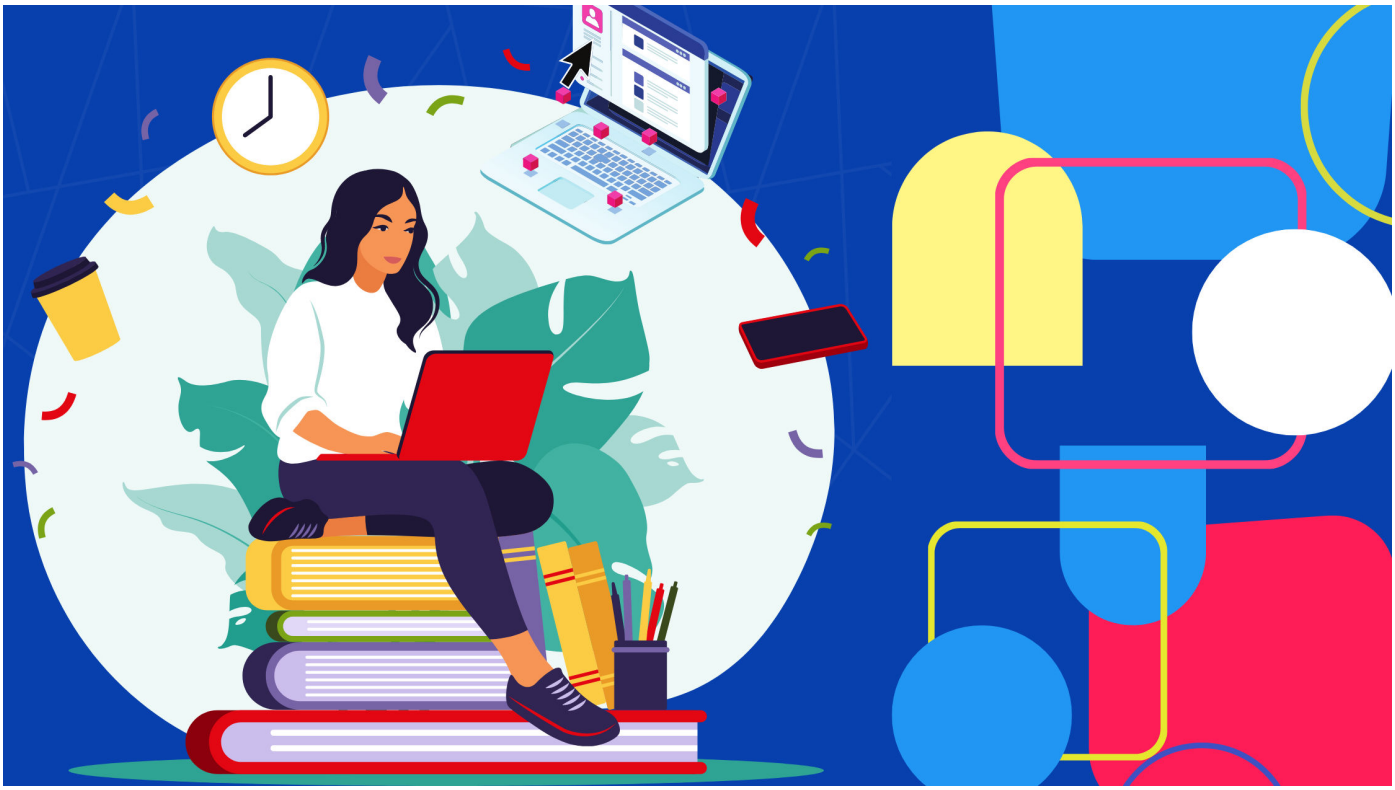
A: A
B: x
C: y
D: Both B and C

Q9: What are the Shapes for which you calculate the area under the curve?

A: Definite
B: Indefinite
C: Proper
D: Detailed

Q10: In what shape do you break a shape and use a Trapezoidal formula?

A: Circle
B: Rectangle
C: Trapezoid
D: Square



Answers

Q1: B - Integral

Q2: A - Positive

Q3: A - $\int[a, b] f(x)\, dx$

Q4: D - Negative

Q5: C - $b\int a\, f(x)\, dx$

Q6: A - $\int_b^a f(x)dx \approx h^3[f(x_0)+f(x_n)+4\times(f(x_1)+f(x_3)+\ldots) + 2\times(f(x_2)+f(x_4)+\ldots)]$

Q7: D - All of these

Q8: D - Both B and C

Q9: B - Indefinite

Q10: C - Trapezoid