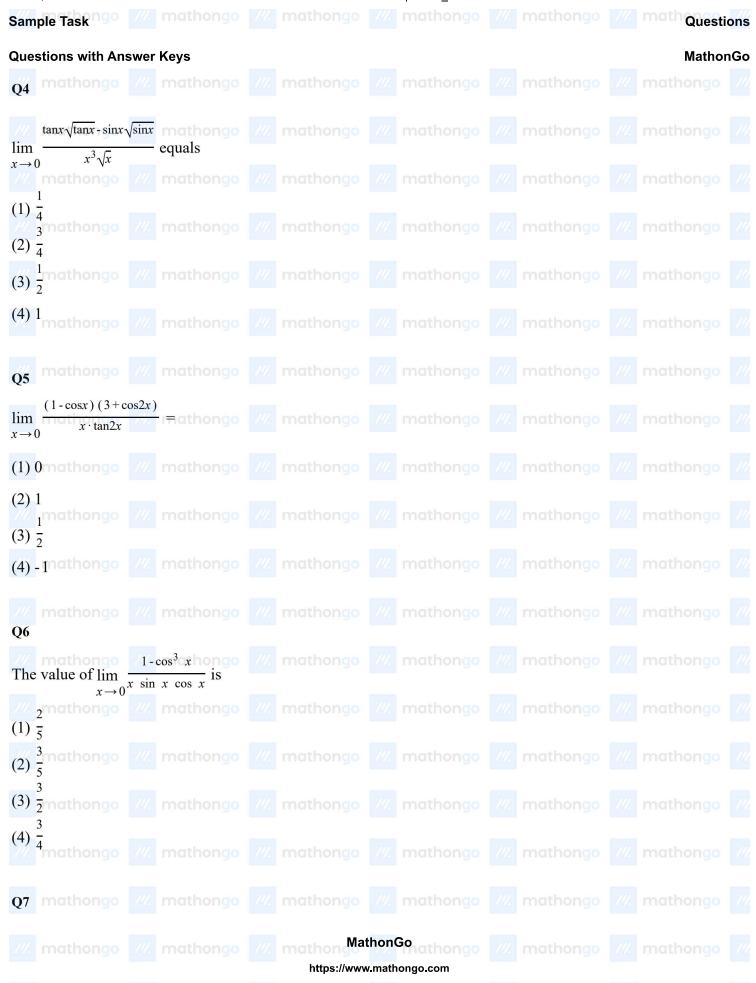
Sample Task Questions

Questions with Answer Keys MathonGo mati $\left[1 - \frac{x}{2}\right] \left[1 - \frac{1}{\sin x}\right]$ mathongo /// mathongo /// mathongo $\lim_{x \to \frac{\pi}{2}} \frac{\frac{L}{2} + \ln\left(\frac{x}{2}\right) \frac{1}{[\pi - 2x]^3}} \text{ is equal to} \qquad \text{mathongo} \qquad \text{matho$ 🗸 lmathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo (2) 0_{mathongo} /// mathongo /// mathongo /// mathongo /// mathongo $(4) \infty$ Q2mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo $1-\cos^3(\sin x)$ $(1)_{\frac{1}{2}}$ (2) 1 mathongo W. mathongo W. mathongo W. mathongo W. mathongo (3) 0 mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo (4)2Mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo The value of $\lim_{x\to -\infty} \frac{x^2 \tan\left(\frac{1}{x}\right)}{\sqrt{4x^2-x+1}}$ is equal to mathongo /// mathongo /// mathongo /// (1) 1 $\frac{1}{2}$ mathongo /// mathongo /// mathongo /// mathongo /// mathongo (3) -1 mathongo /// mathongo /// mathongo /// mathongo /// mathongo $(4) - \frac{1}{2}$ ///. mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo

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Questions with Answer Keys

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If $\lim_{x \to 3} (x^{-3} \sin 3x + ax^{-2} + b)$ exists and is equal to 0, then

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(2) a = 3 and b = 9/2 mathongo /// mathongo /// mathongo

(3) a = -3 and b = -9/2

(4) a = 3 and b = -9/2 mathongo /// mathongo /// mathongo /// mathongo

Q8

If f(x) is a differentiable function such that f'(1) = 4 and $f'(4) = \frac{1}{2}$, then value of $\lim_{x \to 0} \frac{f(x^2 + x + 1) - f(1)}{f(x^4 - x^2 + 2x + 4) - f(4)}$ is :-

(1) 8 mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo

(3)4

(4) Does not exist /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo

 $\left(\sqrt{x^2 + x + 2} - ax - b\right) = 2$, then equation of circle whose centre is (a, 2b) and radius 1 unit is

 $(1) x^2 + v^2 + 2x + 6v + 9 = 0$

(2) $x^2 + y^2 = 2x + 6y + 1 = 0$ nongo /// mathongo /// mathongo /// mathongo

 $(3) x^2 + y^2 - 2x + 6y + 9 = 0$

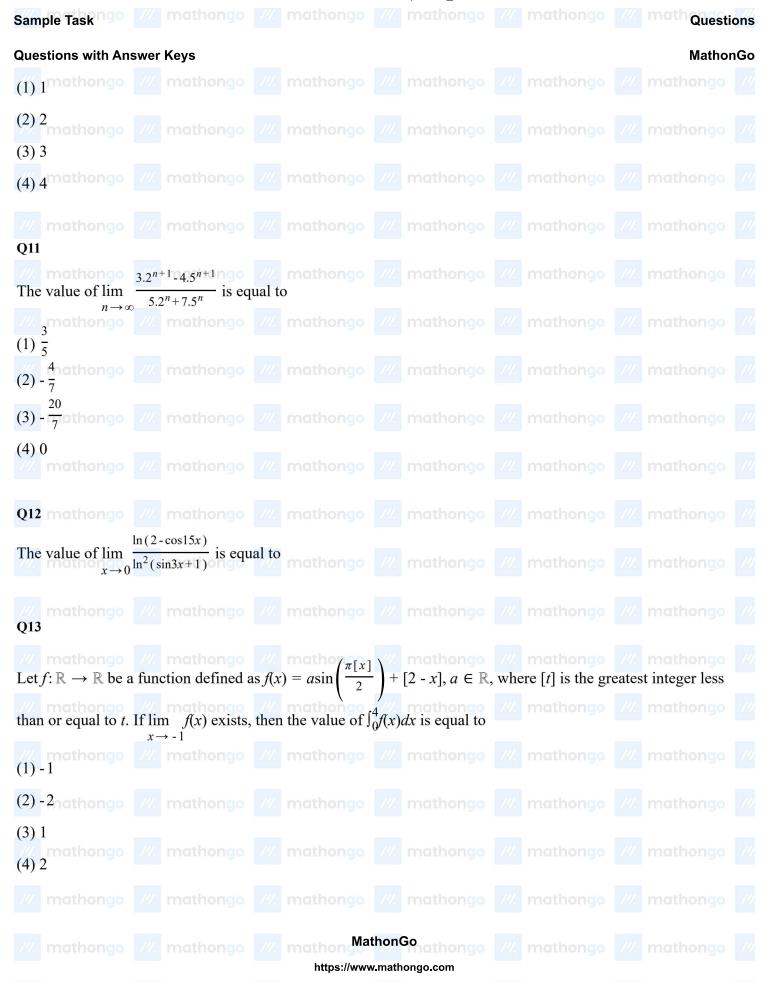
(4) none of these

Q10

For a positive integer m, if $\lim_{x\to\infty} \left(x^3 \ln\left(\frac{x+1}{x}\right) + \frac{x}{2} - x^2\right) = \frac{1}{m}$. Then the value of m is

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Questions with Answer Keys

MathonGo

The integer n for which $\lim_{x\to 0} \frac{(\cos x-1)(\cos x-e^x)}{x^n}$ is a finite nonzero number is

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(2) 2 mathongo /// mathongo /// mathongo /// mathongo /// mathongo

(3) 3mathongo /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo

Q15

If the largest value of the $\lim_{m \to \infty} \left(1 + \frac{a}{x}\right)^{\frac{1}{b}}$ where a, b lies in the interval $\left[\frac{1}{5}, 403\right]$ is e^{λ} , then λ equals mathongo mathongo

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(3) 2017thongo /// mathongo /// mathongo /// mathongo /// mathongo

(4) 2018M. mathongo /// mathongo /// mathongo /// mathongo /// mathongo

Q16 mathongo /// mathongo /// mathongo /// mathongo /// mathongo

 $\lim_{n\to\infty} \left(\frac{2n^2-3}{2n^2-n+1}\right)^{\frac{n^2-1}{n}} \text{ is equal to } \text{mathongo} \text{ mathongo} \text{ mat$

/// mathongo /// mathongo /// mathongo /// mathongo /// mathongo $(1) \frac{1}{\sqrt{e}}$

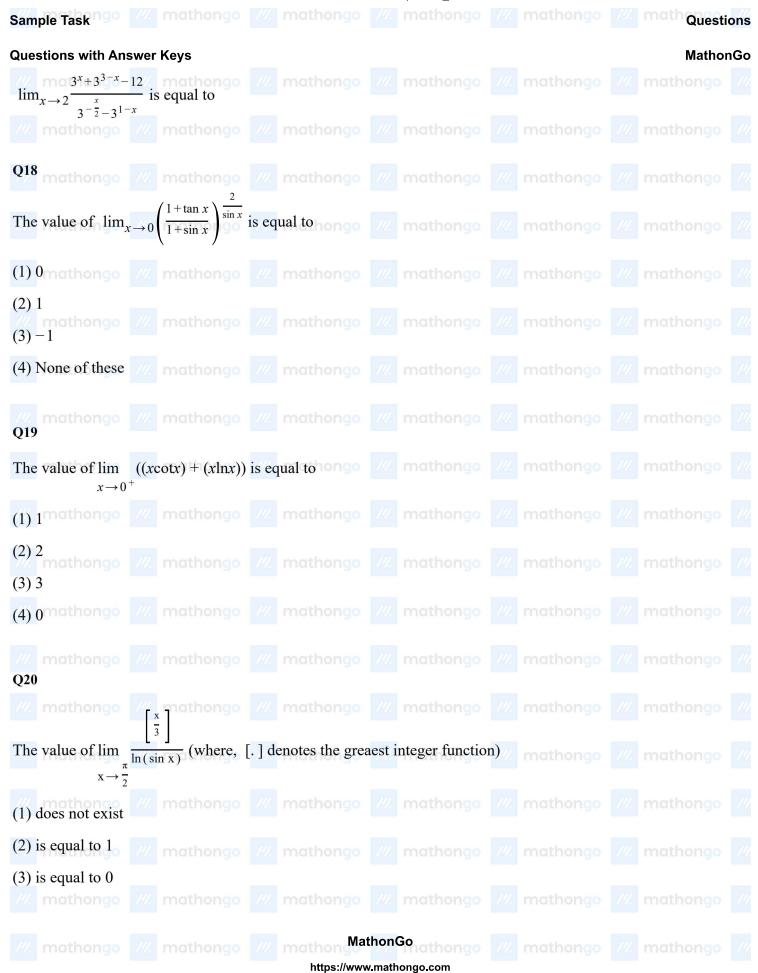
(3) emathongo /// mathongo /// mathongo /// mathongo /// mathongo

(4) = mathongo /// mathongo /// mathongo /// mathongo /// mathongo

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///. mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo

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Questions with Answer Keys

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- (4) is equal to -1

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- Q21

- The $\lim_{x\to 0} x^8 \left[\frac{1}{x^3}\right]$ (where [x] is greatest integer function) is (Mark incorrect option) mathong was mathong with mathong mathong
- (1) a nonzero real number mathongo mathongo mathongo mathongo mathongo mathongo
- (2) a rational number
- (3) an integer

- (4) zero ///. mathongo ///. mathongo ///. mathongo ///. mathongo
- mathongo /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo

- If $\lim_{x \to \infty} \frac{\sin 2x a \sin x}{x^3}$ exists finitely, then the value of a is /// mathongo /// mathongo
- (1) Omathongo /// mathongo /// mathongo /// mathongo /// mathongo

- mathongo /// mathongo /// mathongo /// mathongo /// mathongo

- (3) 1
- (4) 4mathongo /// mathongo /// mathongo /// mathongo /// mathongo

- **Q23**

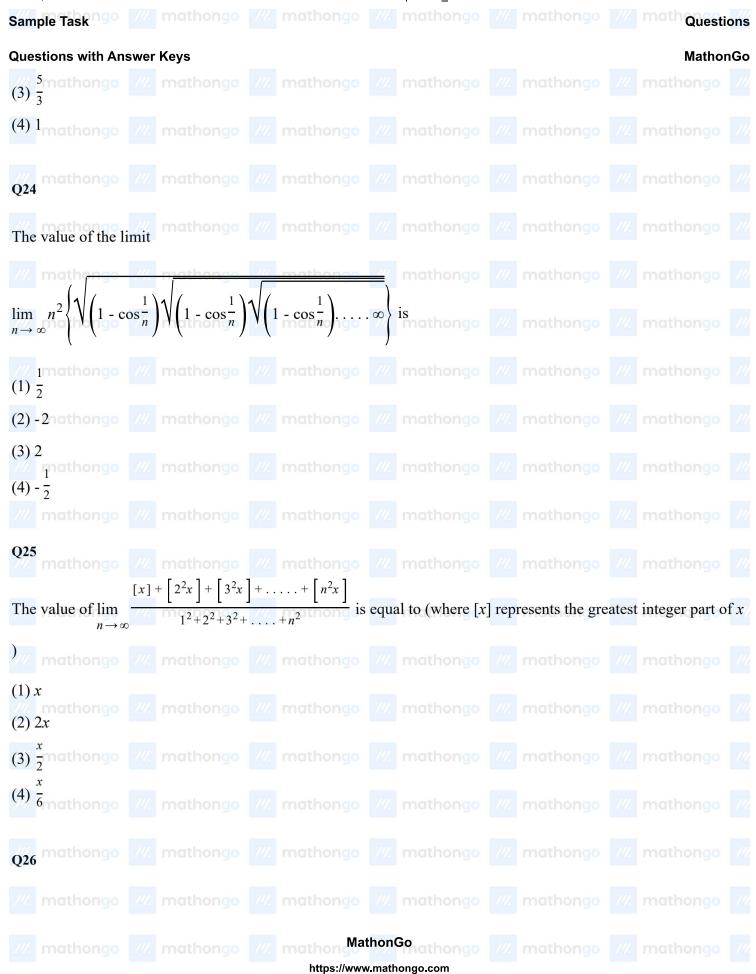
- The value of lim

- is equal to mathongo $\frac{1}{2}$ mathongo $\frac{1}{2}$ mathongo $\frac{1}{2}$ mathongo $\frac{1}{2}$ mathongo
- (where, [.] represents the greatest integer function) mathongo mathongo mathongo

- (1) mathongo /// mathongo /// mathongo /// mathongo /// mathongo

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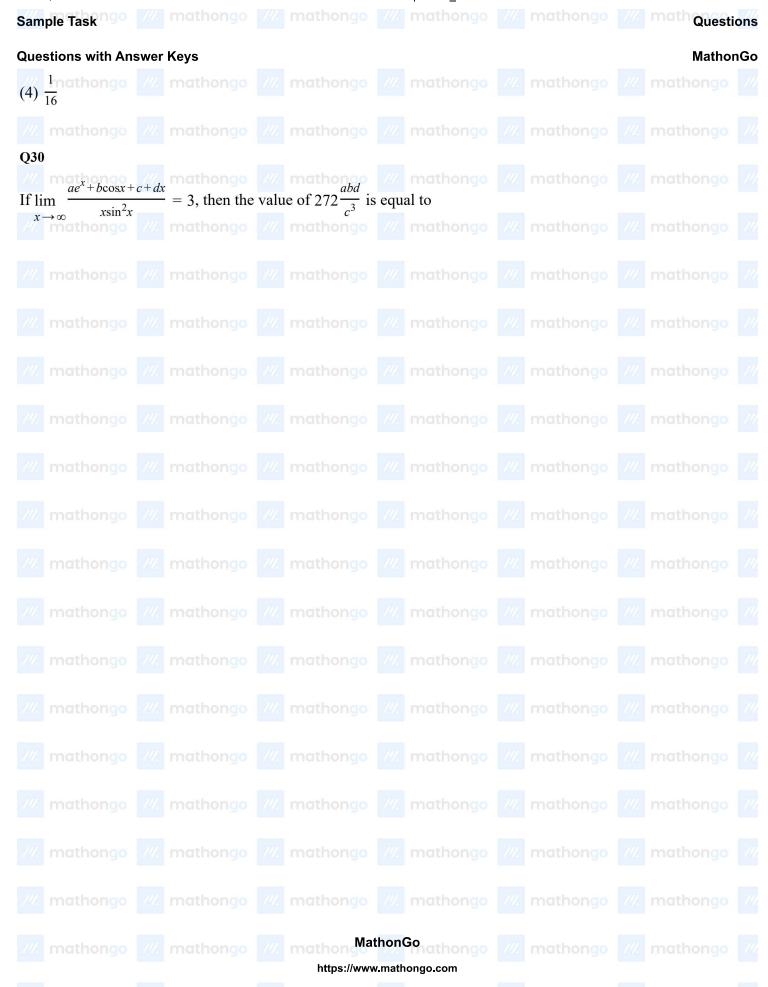


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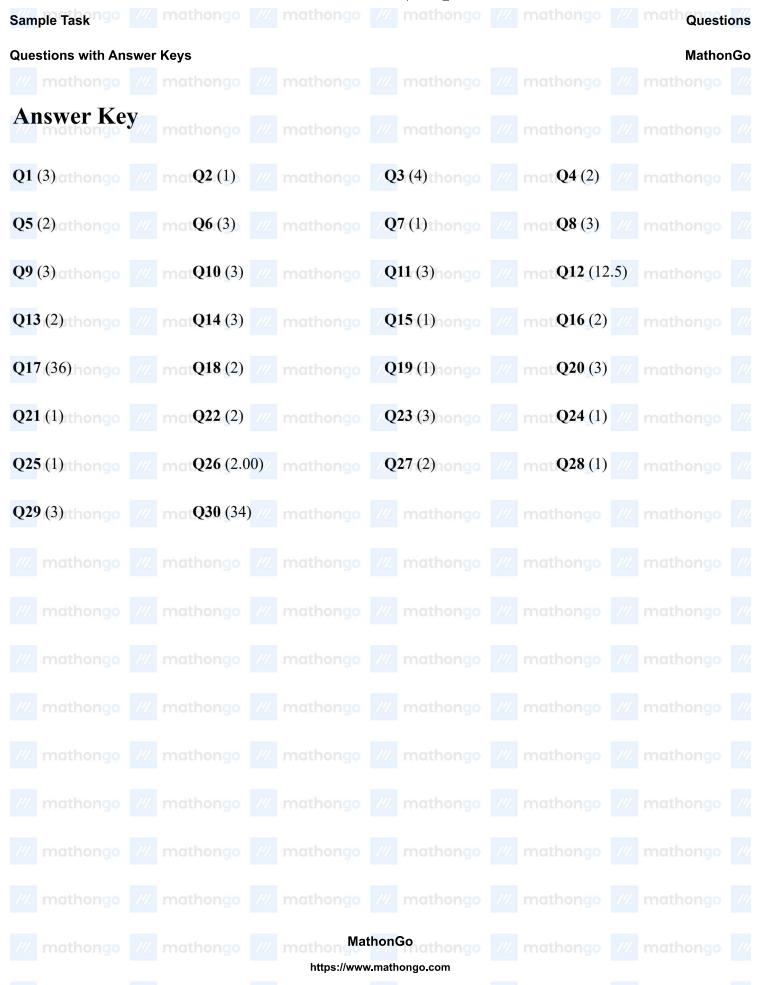
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Sample Taskingo /// mathongo **Questions with Answer Keys** Let α , $\beta \in R$ be such that $\lim_{x\to 0} \frac{x^2 \tan (\alpha x)}{\beta x - \tan (2x)} = 1$, then the value of $5\beta + 3\alpha$ is: MathonGo $\cos(\sin x) - \cos x$ $\lim_{x\to 0} \frac{1}{\text{mathongo}} \text{ is equal to}$ $\frac{x\to 0}{\text{mathongo}} \text{ is equal to}$ $(1) \frac{1}{3}$ Imathongo /// mathongo /// mathongo /// mathongo /// mathongo (4) 12 nathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo The value of $\lim_{n \to \infty} \frac{[r] + [2r] + \ldots + [nr]}{n^2}$, where r is non-zero real number and [r] denotes the greatest integer less than or equal to r, is equal to : ngo /// mathongo /// mathongo /// mathongo /// mathongo (1) mathongo /// mathongo /// mathongo /// mathongo /// mathongo (2) rmathongo /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo (4) 0mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo mathongo /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo mathongo $e^{-\frac{x^2}{2}}$ cos x thongo ///. mathongo ///. mathongo ///. mathongo $\lim_{x \to 0} \frac{1}{x^3 \tan x}$ is equal to The value of lim -///. mathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo $(1)_{\frac{\pi}{4}}$ Imathongo /// mathongo /// mathongo /// mathongo /// mathongo (3) Tanathongo ///. mathongo ///. mathongo ///. mathongo ///. mathongo /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo https://www.mathongo.com

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