APOLLO

Limit of a Function
FBISE Mathematics Class 12 (HSSC-II)

Domain A: Numbers and Algebra
9 questions | questions
Original FBISE question crops. National Curriculum 2022-23 topic.

FBISE model paper | Section B Q2(ii) | 4 marks

ii.	Evaluate: $\lim_{x\to 0}\left(\dfrac{\frac{1}{x-1}+\frac{1}{x+1}}{4x}\right)$	4

First Annual 2025 | Section B Q2(i) | 4 marks

(i)	Evaluate: $\lim_{\theta\to 0}\dfrac{1-\cos\theta}{\sin^2\theta}$	04

First Annual 2025 | Section B Q2(i) | 4 marks

(i)	Evaluate: $\lim_{\theta\to 0}\dfrac{\sin^2\theta}{1-\cos\theta}$	04	OR	If $f(x,y)=2x^3-5xy^2+3x^2y-4y^3$ then: a. Find degree of homogeneous f b. Verify Euler's theorem for $f(x$

Second Annual 2025 | Section B Q2(vii) OR | 4 marks

OR	Evaluate $\lim_{x\to 0}\left(\frac{x\,sin4x}{1-cos2x}\right)$	04

First Annual 2025 | Section C Q3 | 8 marks

Q.3	Evaluate $\lim_{\theta\to 0}\dfrac{1-\cos p\theta}{1-\cos q\theta}$	08

Second Annual 2025 | Section C Q3 | 8 marks

Q.3	Verify that $\lim_{x\to a}\dfrac{x^n-a^n}{x-a}=na^{n-1}$	08
Q.4	Find the Taylor series expansion of $\ln(1+x)$ at $x=2$	08

First Annual 2026 | Section B Q2(vii) OR | 4 marks

04	OR	Evaluate $\lim_{x\to 0}\left(\frac{x\,sin4x}{1-cos2x}\right)$

FBISE model paper | Section A Q1(iii) | 1 mark

iii.	What limit given in the following results $\frac{\text{Sin}(1-x)}{(1-x)}=1$?	$x\to -1$	$x\to 0$	$x\to 1$	$x\to\infty$

FBISE model paper | Section B Q2(iv) OR | 4 marks

OR	Evaluate $\lim_{x\to 0}\frac{(1+x)^{-2}-1}{x}$	4