

Related Problem

Q) If $\frac{x^2}{3} + 2 > 25$, then the solution set is

- (A) \mathbb{R} (B) $(2, +\infty)$ (C) $(4, +\infty)$ (D) none

Sol: Given, eqn $\frac{x^2}{3} + 2 > 25$

$$\Rightarrow \frac{x^2}{3} + 2 > \frac{2^2}{3} + 4^2$$

$$\Rightarrow \frac{x^2}{3} + \frac{x^2}{4} > \frac{2^2}{3} + 4^2$$

$f(x) = \frac{x^2}{3} + \frac{x^2}{4}$ is a continuously increasing fn.

\Rightarrow Since both of them increase with value of 'x'.

at $x=4$, $f(x)=25$

so, for all $x > 4$, $f(x) > 25$

$\therefore x \in (4, +\infty)$

option 'C' is correct.