

Hyperbola - Class XI

Past Year JEE Questions

Questions

Question: 01

If a hyperbola has length of its conjugate axis equal to 5 and the distance between its foci is 13, then the eccentricity of the hyperbola is :

- A. $\frac{13}{6}$
- B. 2
- C. $\frac{13}{12}$
- D. $\frac{13}{8}$

Solutions

Solution: 01

Explanation

$$2b = 5 \text{ and } 2ae = 13$$

$$b^2 = a^2(e^2 - 1) \Rightarrow \frac{25}{4} = \frac{169}{4} - a^2$$

$$\Rightarrow a = 6 \Rightarrow e = \frac{13}{12}$$