



Air maths tuition

Interact, engage and perform

Intersection line and hyperbola

Find the coordinates of the points where the line $y = x - 2$ crosses the curve $y = \frac{3}{x}$

At the pt. of intersection.

$$\frac{3}{x} = x - 2$$

$$\therefore 3 = x^2 - 2x$$

$$\therefore x^2 - 2x - 3 = 0$$

$$\therefore (x - 3)(x + 1) = 0$$

$$\therefore x - 3 = 0 \text{ or } x + 1 = 0$$

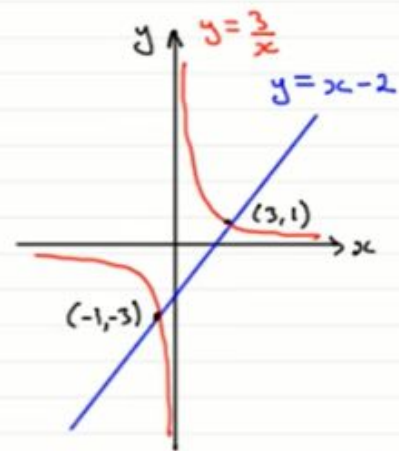
$$\therefore x = 3 \text{ or } x = -1$$

$$\text{when } x = 3, \\ y = 1$$

$$\text{when } x = -1$$

$$y = -3$$

\therefore pts of intersection
are $(3, 1)$ and
 $(-1, -3)$



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