



Air maths tuition

Interact, engage and perform

Logarithms - Simultaneous Equations (2)

$\log x - \log 2 = 2 \log y$ ①	$\therefore (2y-1)(y-2) = 0$
$x - 5y + 2 = 0$ ②	$\therefore 2y-1=0$ or $y-2=0$
From ①	$\therefore y = \frac{1}{2}$ or $y = 2$
$\log \frac{x}{2} = \log y^2$	Sub $y = \frac{1}{2}$ in ③ $\therefore x = 2\left(\frac{1}{2}\right)^2$
$\therefore \frac{x}{2} = y^2$	$= \frac{1}{2}$
$\therefore x = 2y^2$ ③	Sub $y = 2$ in ③ $\therefore x = 2(2)^2$
Sub ③ in ②	$= 8$
$\therefore 2y^2 - 5y + 2 = 0$	$\therefore x = \frac{1}{2}, y = \frac{1}{2}$ or $x = 8, y = 2$

With the acknowledgement of [Exam Solutions](#).
Find lots more revision sheets on [Air Maths Tuition](#).
[This Video](#)



Exam Solutions
maths made easy