



Air maths tuition

Interact, engage and perform

Simultaneous Equations - Substitution Method - Tutorial 1

$x^2 + y^2 = 5$ ①	$\therefore (y-1)(y-2) = 0$
$x + y = 3$ ②	$\therefore y-1=0 \text{ or } y-2=0$
from ②: $x = 3-y$ ③	$\therefore y=1 \text{ or } y=2$
Sub. ③ into ①:	Sub. into ③
$\therefore (3-y)^2 + y^2 = 5$	when $y=1$, $x = 3-1$ $= 2$
$\therefore (3-y)(3-y) + y^2 = 5$	when $y=2$, $x = 3-2$ $= 1$
$\therefore 9 - 6y + y^2 + y^2 = 5$	$\therefore x=2, y=1$
$\therefore 2y^2 - 6y + 4 = 0$	or $x=1, y=2$
$\therefore y^2 - 3y + 2 = 0$	

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