Simultaneous Equations

Unscramble and define the key words.

bairavel   cifontecif   tageniev   tubscart

Skill 1

Solve these simultaneous equations by **subtracting**.

$5x + 5y = 35$
$2x + 5y = 26$

$7x - 2y = 22$
$5x - 2y = 14$

$9x + 6y = 39$
$5x + 6y = 35$

Solve these simultaneous equations by **adding**.

$x + 2y = 20$
$9x - 2y = 80$

$3x + 4y = 48$
$7x - 4y = 32$

$5x - 3y = -3$
$7x + 3y = 39$

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Skill 2

Manipulate **one** of the equations to be able to solve these simultaneous equations.

$5x + 2y = 20$
$2x + 4y = 24$

$2x + y = 5$
$x + 3y = 5$

$2x + 9y = 69$
$x + 3y = 24$

$x + 2y = 8$
$2x + 3y = 14$

$3x + 2y = 26$
$4x - y = 20$

$2x + y = 13$
$5x - 4y = 13$

Skill 3

Manipulate **both** of the equations to be able to solve these simultaneous equations.

$2x + 5y = 24$
$4x + 3y = 20$

$5x + 3y = 23$
$2x - 4y = 12$

$5x + 2y = 13$
$2x + 6y = 26$

$5x - 7y = 27$
$3x - 4y = 16$

$2x - 3y = -4$
$3x + 2y = 7$

$2x - 7y = 17$
$5x + 3y = -1$

Memory

You need one of the coefficients in front of the same variable in each equation to be the same.

$3x + \boxed{2y} = 22$
$5x - \boxed{2y} = 10$

Stretch 1

5 adult tickets and 3 child tickets to a concert costs £99. 8 adult tickets and 6 child tickets costs £168. How much do adult and child tickets cost?

Stretch 2

$4x - 0.5y = 12.5$
$3x + 0.8y = 8.2$