Solving simultaneous equations by elimination (1)

27a

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Name:

Solve:

a) $4x + 3y = 19$
$x + 3y = 7$

x = 4, y = 1

d) $3x + y = 16$
$4x + y = 18$

x = 2, y = 10

b) $2x + 6y = 34$
$2x + 3y = 19$

x = 2, y = 5

e) $4x + 6y = 32$
$x + 2y = 10$

x = 2, y = 4

c) $6x + 3y = 39$
$6x + 8y = 64$

x = 4, y = 5

f) $3x + 3y = 9$
$5x + 9y = 3$

x = 6, y = -3

Solve:

g) $2x - 3y = -16$
$3x + 3y = 21$

x = 1, y = 6

i) $5x - 2y = 31$
$3x + 2y = 25$

x = 7, y = 2

h) $7x + y = 44$
$x - y = 4$

x = 6, y = 2

j) $-2x + 5y = 14$
$2x + 3y = 18$

x = 3, y = 4

Exam question:
Two families go to a theatre production.
The Parker family of two adults and three children pay £69.
The Rogers family of three adults and five children pay £109.
Work out the cost of an adult ticket and a child ticket.

2A + 3C = 69
3A + 5C = 109

A = 18, y = 11

Solving simultaneous equations by elimination (2)

27b

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Name:

Solve:

e) $2x + y = 14$
$3x - y = 16$

x = 6, y = 2

g) $4x + 7y = 39$
$-4x + 3y = -29$

x = 8, y = 1

f) $x - y = -4$
$x + 6y = 24$

x = 0, y = 4

h) $4x + 2y = 8$
$8x - 7y = 60$

x = 4, y = -4

Solve:

a) $3x + y = 15$
$4x + 5y = 53$

x = 2, y = 9

d) $2x + y = 10$
$5x - 7y = -51$

x = 1, y = 8

b) $7x + 5y = 10$
$x + 2y = -5$

x = 5, y = -5

e) $7x - 2y = 1$
$8x - 6y = 16$

x = -1, y = -4

c) $5x + 2y = 24$
$4x - 6y = 4$

x = 4, y = 2

f) $7x + 4y = 10$
$8x - 9y = -70$

x = -2, y = 6

Exam question:

I think of two numbers.
When I double the first number and add on the second, I get 17.
When I treble the first number and subtract the second, I get 18
What are the two numbers I am thinking of?

2x + y = 17
3x – y = 18
5x = 35 so x = 7 2(7) + y = 17 so y = 3