Solving simultaneous equations by substitution

MATHS·SCHOOL

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Name:

Solve:

a) $y = x + 5$
$4x + y = 25$

x = 4, y = 9

b) $y = 2x$
$4x + 3y = 30$

x = 3, y = 6

c) $y = 3x$
$x + 2y = 28$

x = 4, y = 12

d) $y = 2x + 1$
$5x + 3y = 25$

x = 2, y = 5

Solve:

e) $y = x + 2$
$6x - y = 28$

x = 6, y = 8

f) $y = 2x - 3$
$3x - y = 11$

x = 8, y = 13

g) $3x + y = 18$
$2x + 5y = 25$

x = 5, y = 3

h) $x + 4y = 19$
$7x + 2y = 55$

x = 7, y = 3

Exam question:

Below are the equations of two straight lines.
Find the coordinates where the straight lines below cross.

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

x – 2(3x + 3) = 4
x – 6x – 6 = 4
-5x = 10
x = -2   **y = 3(-2) + 3 = -3**