Solving Non-Linear Simultaneous Equations

Solve these simultaneous equations.

(a) $y = x^2 - 4$

$y = 3x$

(b) $y = x^2 + 5x$

$y = 2x + 10$

(c) $y = 2x^2 + x - 3$

$y = 3x + 1$

(a) $x=4$, $y=12$
$x=-1$, $y=-3$

(b) $x=-5$, $y=0$
$x=2$, $y=14$

(c) $x=2$, $y=7$
$x=-1$, $y=-2$

Solve these simultaneous equations.

(a) $x^2 + 8y = 13$

$x + 2y = 2$

(b) $y = 2x^2$

$3x + y = 20$

(c) $y = 3x^2 - 4$

$y = 2x - 3$

(a) $x=5$, $y=-\frac{3}{2}$
$x=-1$, $y=\frac{3}{2}$

(b) $x=\frac{5}{2}$, $y=\frac{25}{12}$
$x=-4$, $y=32$

(c) $x=-\frac{1}{3}$, $y=-\frac{11}{3}$
$x=1$, $y=-1$

Solve these simultaneous equations.

(a) $x^2 + y^2 = 25$

$x + y = 7$

(b) $x^2 + y^2 = 9$

$y = x + 3$

(c) $x^2 + y^2 = 5$

$y = 3x + 5$

(a) $x=4$, $y=3$
$x=3$, $y=4$

(b) $x=-3$, $y=0$
$x=0$, $y=3$

(c) $x=-2$, $y=-1$
$x=-1$, $y=2$

A netball court has an area of 224 m^2. If the length were decreased by 1 m and the width increased by 1 m, the area would be increased by 1 m^2. Find the dimensions of the court.

16m by 14m