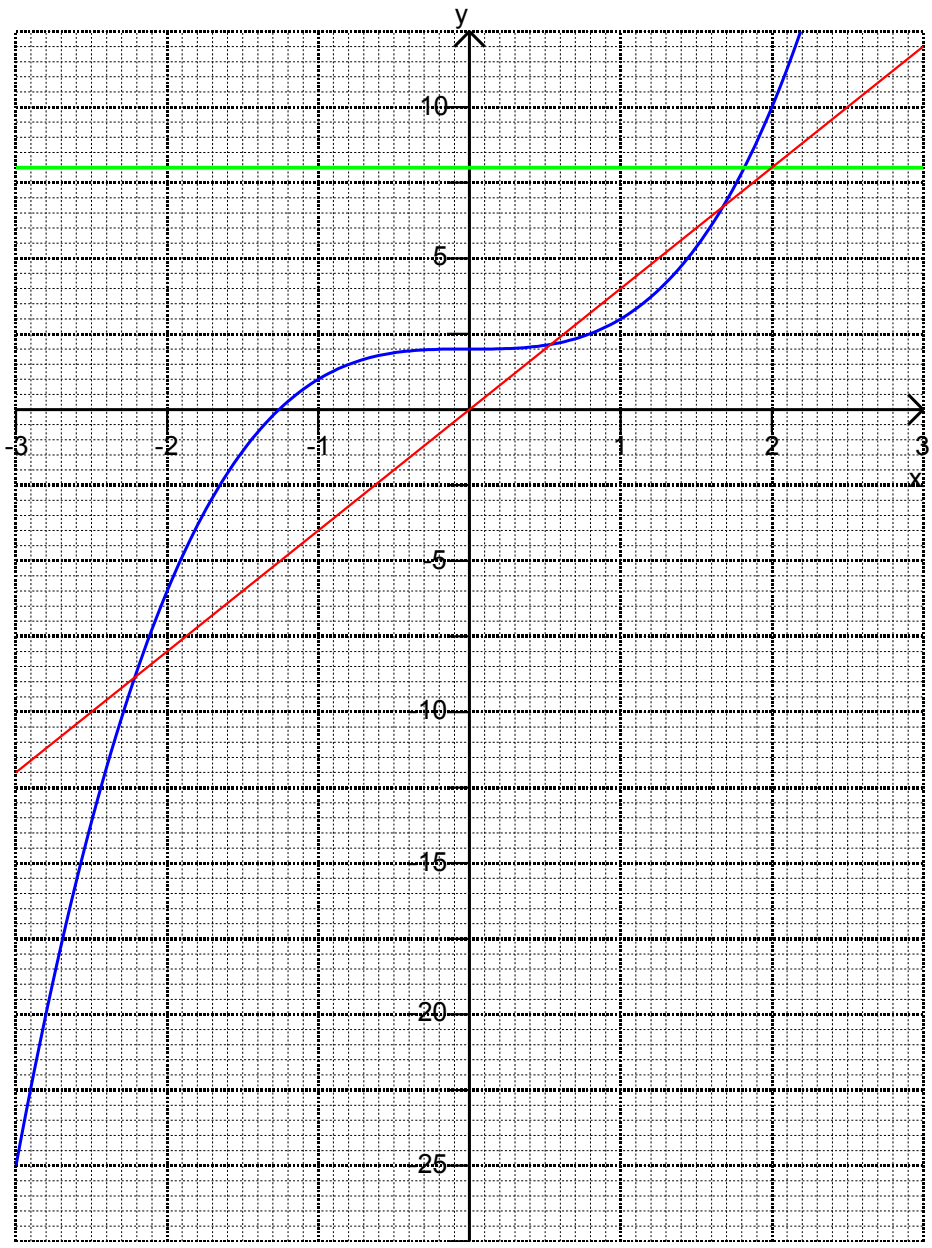
Solutions to Past Paper Questions – Algebraic Graphs

11) (a)

x	–3	–2	–1	0	1	2
y	–25	–6	1	2	3	10

(b) See right



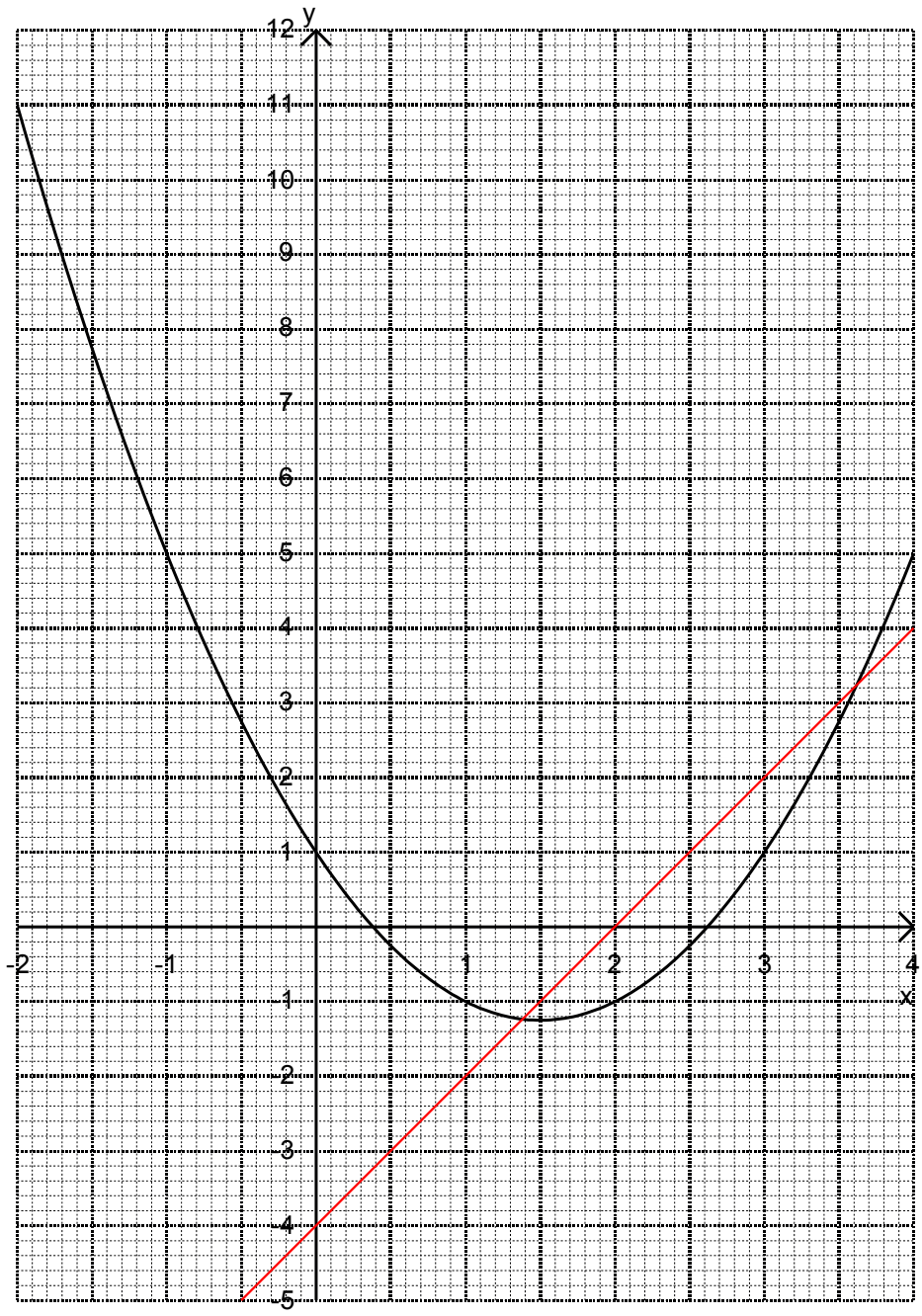
(c) (Where graph crosses y=0)
$x = -1.25$

(Where graph crosses y=8)
$x = 1.8$

(d) $x^3 - 4x + 2 = 0$
(add $4x$ to each side)
$x^3 + 2 = 4x$
So draw line $y = 4x$

Solutions:
$x = -2.2$ or 0.5 or 1.7

7) (a) Missing values: 5 and –1
(b)



(c) –1.25
(d) Draw line y = 2x – 4 (shown in red above). Solutions x = 1.4 and x = 3.6

17) (a) $x^2 - 5 + \frac{2}{x} = 0$

(add 8 to each side)

$x^2 + 3 + \frac{2}{x} = 8$

so draw line y = 8

Lines cross at x = -2.4, x = 0.4 or x = 2

(b) $x^2 - 3x + \frac{2}{x} = 0$

(add 3x + 3 to each side)

$x^2 + 3 + \frac{2}{x} = 3x + 3$

So draw line y = 3x + 3

Lines cross at x = -0.7, x = 1 or x = 2.7