

Algebra Revision

3

(a) An apple costs 20p and a banana costs 25p. Write a formula for the total cost C of x apples and y bananas.

$$C = 20x + 25y$$

(b) Solve $4x + y = 13$
 $2x - 3y = 17$

$$x = 4, y = -3$$

(c) Expand and simplify $(2x - 1)(3x + 5)$

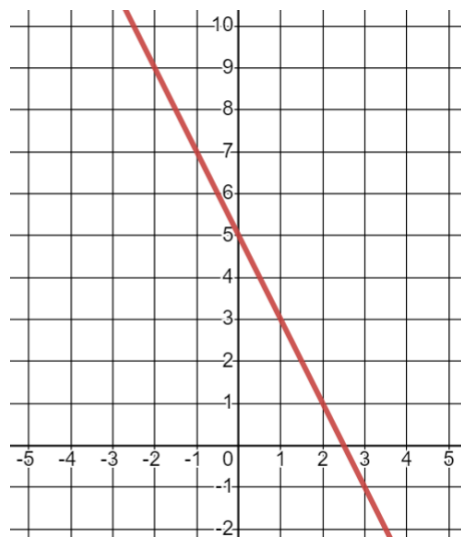
$$6x^2 + 7x - 5$$

(d) (i) Factorise $x^2 + 2x - 35$
 $(x + 7)(x - 5)$
(ii) Hence solve $x^2 + 2x - 35 = 0$

$$x = -7, x = 5$$

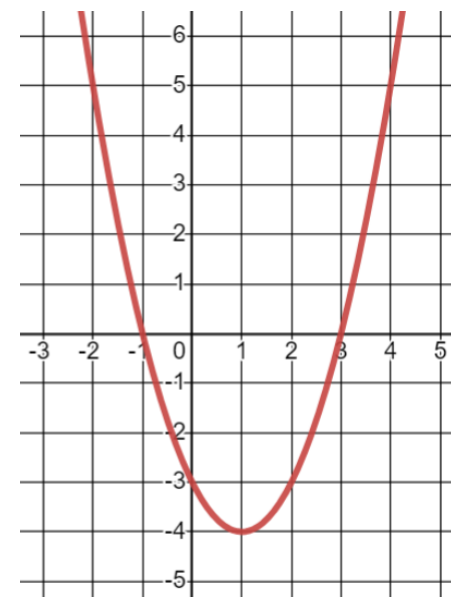
(e) Plot the graph of $y = 5 - 2x$

x	-2	-1	0	1	2
y	9	7	5	3	1



(f) Plot the graph of $y = x^2 - 2x - 3$

x	-2	-1	0	1	2	3	4
y	5	0	-3	-4	-3	0	5



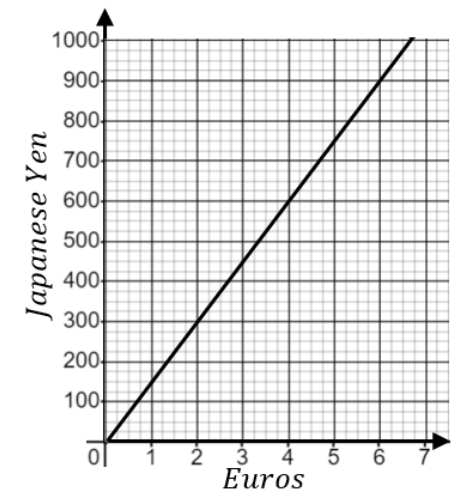
(g) Solve $-5 < 2x + 3 \leq 4$

$$-4 < x \leq 0.5$$

(i) Find the y-intercept of the straight line with equation $2y - 5x = 6$

$$(0, 3)$$

(h) Use the graph to convert 50 euros into Japanese Yen



$$7500 \text{ Yen}$$