

Name: _____

Factorising quadratics with coefficients of x^2 greater than 1

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Factorise the following

a) $2x^2 + 14x + 12$

$$(2x + 2)(x + 6)$$

f) $2x^2 + 5x + 3$

$$(2x + 3)(x + 1)$$

b) $2x^2 + 18x + 28$

$$(2x + 4)(x + 7)$$

g) $4x^2 + 29x + 7$

$$(4x + 1)(x + 7)$$

c) $5x^2 - 15x - 50$

$$(5x + 10)(x - 5)$$

h) $3x^2 - 5x - 2$

$$(3x + 1)(x - 2)$$

d) $7x^2 + 42x + 35$

$$(7x + 7)(x + 5)$$

i) $6x^2 - 5x - 6$

$$(3x + 2)(2x - 3)$$

Solve:

a) $4x^2 + 14x + 27 = 2x^2 + x + 7$

$$x = -4 \text{ or } x = -5/2$$

b) $14x^2 + 18x + 12 = 4x^2 + 9x + 10$

$$x = -1/2 \text{ or } x = -2/5$$

Exam question:

Solve $4x^2 + 17x = -4$

$$x = -4 \text{ or } x = -1/4$$

