More Factorising

Ex 1 $x^2 - 3x + 2$
$= (x - 1)(x - 2)$

$+1 \quad +2$
$-1 \quad -2$ ✓

Ex 2 $x^2 - 5x - 6$
$= (x + 1)(x - 6)$

$+1 \quad -6$ ✓
$-1 \quad +6$
$+2 \quad -3$
$-2 \quad +3$

Ex 3 $x^2 + 11x + 10$
$= (x + 1)(x + 10)$

$+1 \quad +10$ ✓
$-1 \quad -10$
$+2 \quad +5$
$-2 \quad -5$

Ex 4 $x^2 + 5x - 14$
$= (x - 2)(x + 7)$

$+1 \quad -14$
$-1 \quad +14$
$+2 \quad -7$
$-2 \quad +7$ ✓

Exercise

Factorise

1) $x^2 - 3x - 10 = (x + 2)(x - 5)$

2) $x^2 - 7x + 6 = (x - 1)(x - 6)$

3) $x^2 + 5x + 4 = (x + 1)(x + 4)$

4) $x^2 + x - 6 = (x + 3)(x - 2)$

5) $x^2 - 10x + 9 = (x - 1)(x - 9)$

6) $x^2 - 8x - 20 = (x + 2)(x - 10)$

7) $x^2 + 10x + 21 = (x + 3)(x + 7)$

8) $x^2 - 13x + 30 = (x-3)(x-10)$

9) $x^2 + 27x + 50 = (x+2)(x+25)$

10) $x^2 + 7x - 18 = (x-2)(x+9)$

11) $x^2 + 4x - 21 = (x-3)(x+7)$

12) $x^2 - 6x - 27 = (x+3)(x-9)$

13) $x^2 + 6x + 5 = (x+1)(x+5)$

14) $x^2 - 14x + 40 = (x-4)(x-10)$

15) $x^2 + 18x - 19 = (x-1)(x+19)$

16) $x^2 - 12x + 11 = (x-1)(x-11)$

17) $x^2 + 2x - 3 = (x-1)(x+3)$

18) $x^2 + 8x + 7 = (x+1)(x+7)$

19) $x^2 - 16x + 28 = (x-2)(x-14)$

20) $x^2 + 8x - 9 = (x-1)(x+9)$

21) $x^2 - x - 12 = (x+3)(x-4)$

22) $x^2 - 15x + 14 = (x-1)(x-14)$

23) $x^2 - 38x - 80 = (x+2)(x-40)$

24) $x^2 + 10x + 16 = (x+2)(x+8)$

25) $x^2 - 12x - 28 = (x+2)(x-14)$

Solving Quadratic Equations

Ex 1 Solve $x^2 - 12x - 28 = 0$

$(x+2)(x-14) = 0$

Either $x + 2 = 0$ or $x - 14 = 0$

$\underline{x = -2}$ $\underline{x = 14}$

Ex2 Solve $x^2 + 10x + 16 = 0$

$(x+2)(x+8) = 0$

Either $x + 2 = 0$ or $x + 8 = 0$

$\underline{x = -2}$ $\underline{x = -8}$

Homework Solve

1) $x^2 - 3x - 4 = 0$

2) $x^2 + 8x - 9 = 0$

3) $x^2 + 11x + 10 = 0$

4) $x^2 - 17x - 18 = 0$

5) $x^2 + 6x - 7 = 0$