Factoring Trinomials (a=1)

Questions

For problems 1-9, factor the trinomial.

1) $x^2 + 5x + 6$
   The answer is $(x + 2)(x + 3)$

2) $x^2 - 4x - 21$
   The answer is $(x - 7)(x + 3)$

3) $x^2 + 5x - 6$
   The answer is $(x + 6)(x - 1)$

4) $x^2 - 4x + 4$
   The answer is $(x - 2)(x - 2)$ or $(x - 2)^2$

5) $x^2 + 7x + 12$
   The answer is $(x + 3)(x + 4)$

6) $x^2 - 8x + 12$
   The answer is $(x - 6)(x - 2)$

7) $x^2 + 5x + 6$
   The answer is $(x + 2)(x + 3)$

8) $x^2 - 6x + 8$
   The answer is $(x - 4)(x - 2)$

9) $x^2 - 8x - 20$
   The answer is $(x - 10)(x + 2)$

Challenge questions

10) $x^4 + 5x^2 + 6$
    The answer is $(x^2 + 2)(x^2 + 3)$

11) $x^4 - 5x^2 + 4$
    The answer is $(x - 1)(x + 1)(x - 2)(x + 2)$

12) What is the sum of the solutions of $x^2 + 5x = 6$?
    The answer is -5

13) Solve for x. $4 = \dfrac{x^2 - 9}{3 - x}$
    The answer is $x = -7$