Solving Quadratic Equations, Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a};\ ax^2 + bx + c = 0$$

By use of the quadratic formula solve each of the following equations. Assume R = {all real numbers}. Label a, b, and c in each problem.

1. $x^2 - 8x + 15 = 0$
2. $x^2 + 7x - 8 = 0$
3. $x^2 + x - 42 = 0$
4. $x^2 - 11x + 30 = 0$
5. $2x^2 - x - 1 = 0$
6. $6x^2 - x - 15 = 0$
7. $4x^2 - 23x = 6$
8. $15x^2 - 16x = 15$
9. $8x^2 - 6x = -1$
10. $3x^2 - 20x = 7$
11. $x^2 - 4x + 1 = 0$
12. $x^2 + 10x + 21 = 0$
13. $4x^2 - 12x + 7 = 0$
14. $9x^2 + 6x - 4 = 0$
15. $x^2 + 10x + 19 = 0$
16. $3x^2 + 12x + 8 = 0$
17. How was the Quadratic Formula derived?