1. quadratic trinomial

2. linear monomial

3. constant monomial

4. quadratic binomial

5.
$-3x^3 + x^2 + 11x + 18$
leading coefficient: -3

6.
$x^2 + x + 25$
leading coefficient: 1

7. $13x^2 + 9x$

8.
$8x^2 - 5x + 3 - 11x^2 - 5x - 15$
$-3x^2 - 10x + 18$

9. $6x^4 - 24x^3 + 33x^2$

10.
$x^2 - 6x + 5x - 30$
$x^2 - x - 30$

11.
$6x^2 - 2x + 21x + 7$
$6x^2 - 23x + 7$

12.

$8x^4 - 18x^3 - 39x^2 - 78x - 27$

$$\begin{array}{r} 2x^2 - 7x - 3 \\ \times \quad 4x^2 + 5x + 9 \\ \hline 18x^2 - 63x - 27 \\ 10x^3 - 35x^2 - 15x \\ + 8x^4 - 28x^3 - 12x^2 \\ \hline 8x^4 - 18x^3 - 29x^2 - 78x - 27 \end{array}$$

$18x^2 - 63x - 27 + 10x^3 - 35x^2 - 15x + 8x^4 - 28x^3 - 12x^2$

$= 8x^4 - 18x^3 - 29x^2 - 78x - 27$

13.

$P = 2l + 2w;\ l = x^2 + 3x + 4,\ w = 5x + 1$

$P = 2(x^2 + 3x + 4) + 2(5x + 1) = 2x^2 + 6x + 8 + 10x + 2$

$P = 2x^2 + 16x + 10$ units

14.

$A = lw;\ l = x^2 + 3x + 4,\ w = 5x + 1$

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

$A = 5x^3 + 15x^2 + 20x + x^2 + 3x + 4$

$A = 5x^3 + 16x^2 + 23x + 4$ square units

15.

$2x^2 + 13x - Qx - 13Q = 2x^2 + 7x - 39$

$13x - 2Qx = 7x$ OR $-13Q = -39$

$13 - 2Q = 7$ $Q = 3$

$-2Q = -6$

$Q = 3$