Adding and Subtracting Polynomials

<table>
<thead>
<tr>
<th>Monomial</th>
<th>Binomial</th>
<th>Trinomial</th>
</tr>
</thead>
<tbody>
<tr>
<td>*numbers and variables combined through multiplication</td>
<td>*sum of 2 monomials (2 monomials combined by + or -)</td>
<td>*sum of 3 monomials (3 monomials combined by + or -)</td>
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<tr>
<td>Examples: -3x^8y, -9, 14m</td>
<td>Examples: 4x - 7, 2x + 9y, 2 + 13x</td>
<td>Examples: a + 2b + 4c, x^2 + 8x + 9, 2x^2 + 2xy + y^2</td>
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A polynomial is a monomial or sum of monomials.

Find each sum or difference.

1. \((4x - 5) + (3x + 6)\)

2. \((x^2 + y^2) - (4x^2 + 3y^2)\)

3. \((3x^2 - 5xy^2 + y^3) + (-3x^2 - 5xy^2 - y^3)\)

4. \((6x^2 + 12xy + 4y^2) - (2x^2 - 8xy + 2y^2)\)

Some of the measures of polygons are given. \(P\) represents the measure of the perimeter.
Find the measure of the other side or sides.

5. \(P = 5x + 2y\)

6. \(P = 14x^2 + 10x + 12\)
Solve.

7. The sides of a triangle have lengths of \((x + 5)\), \((x - 2)\) and \((2x - 4)\). Find the perimeter of the triangle in terms of \(x\).

8. Find the perimeter of a pentagon that has 3 sides of length \((2x + 3)\) and 2 sides of length \((x - 1)\).

9. One rectangle has an area of \((7x^2 - 4x + 12)\) ft\(^2\). A second rectangle has an area of \((4x^2 + 2x - 1)\) ft\(^2\). How many more square feet is the first rectangle?