

Algebra 1: Adding & Subtracting Polynomials  
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Name: \_\_\_\_\_

Simplify the expressions.

1.  $(4x^2 + 5x - 7) + (x^3 - 2x + 6)$

2.  $(3x^4 + 2x^2 - 4) - (2x^3 - x^2 + 7)$

3. Subtract  $(3x^2 - 2x + 1)$  from  $(5x^3 + 4x - 9)$

4. If  $f(x) = x^2 - 4x + 2$  and  $g(x) = x - 2$ , write an equivalent form of  $f(x) + g(x)$ .

5. If  $f(x) = x^3 + 2x - 5$  and  $g(x) = x^3 - 4x + 3$ , write an equivalent form of  $f(x) - g(x)$ .

6. If  $f(x) = x^3 - 5x + 7$  and  $g(x) = x + 1$ , write an equivalent form of  $f(x) - g(x)$ .

7. Draw a rectangle where the length is 9 more than the width and the width is  $4x$ . Then, write the expression and simplify.