

Polynomials (Part 1): Adding and Subtracting

First & Last Name: _____ Class: _____

If you did not get full points on the *Polynomials* section of the “Pre-Review” test, attempt all of the (non-challenge) questions on this handout. Check your answers using the answer key. If you did not get a correct answer, use Khan Academy to review and master the topic.

Honor Students: you are expected to master the challenge questions.

Section 1: Polynomials intro (KA link)

- Pick the expression that matches this description: A polynomial of the 7th degree with a leading coefficient of 5 and a constant term of 6.
 - $7x^6 - 2x^2 + 5$
 - $6x^5 + x^4 + 7$
 - $5x^7 + 3x^4 - 6$
 - $5x^7 - 8x^3 + 6$
- Which of the following polynomials are in standard form?
 - $3y + 6$
 - $3 - 4p + 6p^5$
 - $-5q^3 + 2q^2 - 5q + 7$
- What are the degrees of the following polynomials?
 - $3y + 6$
 - $3 - 4p + 6p^5$
 - $-5q^{11} + 2q^{12} - 5q + 7$
 - 5

Section 2: Add polynomials (intro) (KA link)

- Add (your answer should be a polynomial in standard form).
 - $(-2h^4 + 3h^3 - h^2 - 6) + (2h^3 + 4h^2 - 6)$
 - $(3f^5 - 5f^3 - 11f) + (9f^3 - 4f - 2)$

Section 3: Subtract polynomials (intro) (KA link)

- Subtract (your answer should be a polynomial in standard form).
 - $(-2h^4 + 3h^3 - h^2 - 6) - (2h^3 + 4h^2 - 6)$
 - $(3f^5 - 5f^3 - 11f) - (9f^3 - 4f - 2)$

Section 4: Add and subtract polynomials (KA link)

- Subtract $-8b^2 + 4b - 5$ from $3b^2 - 4b - 9$ (your answer should be a polynomial in standard form).
- $T = -3g^2 + g - 4$ and $N = -5g^2 + 4g + 7$.
 - What is $N + N$?
 - What is $N - T$?
 - What is $T - N$?
 - [Challenge] What is $T - N - N + T$?

Section 5: Add and subtract polynomials: two variables (intro) (KA link)

- Evaluate (your answer should be a polynomial in standard form).
 - $(-4p^4 + 9p^2q - 3pq^2) + (4p^4 - pq - 5q^2)$
 - $(3f^5 - 5df^3 - 11f^2) - (3f^5 - 4df - 2f^2)$

Section 6: Add and subtract polynomials: two variables (KA link)

- $M = -3f^4 + 7f^2g^2 - 4g^4$ and $N = 2f^4 - 13f^2g^2 + 3g^4$.
 - What is $M + M$?
 - What is $M + N$?
 - What is $M - N$?
 - What is $N - M$?