

Algebra 1 - Adding, Subtracting and Multiplying Polynomials - Test

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Name: _____ Class: _____ Date: ____/____/____

Take this 20-point, 45-minute test to measure your skill with adding, subtracting, and multiplying polynomials (A-APR.A.1). Read each question carefully, show your work, and check units and signs before you move on. If you get stuck, skip the question and return to it at the end.

About this test

- Grade: Algebra 1
- Chapter: Adding, Subtracting and Multiplying Polynomials
- Standards: A-APR.A.1
- Time: 45 minutes
- Total: 20 points

Question 1 - Name polynomials [2 pts]

Polynomial	Name	Degree
$4x^4 - 7x + 1$	?	?
$9x^2$	?	?

Classify these polynomials.

Name each polynomial by its number of terms and give its degree.

Question 2 - Add polynomials [2 pts]

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

Question 3 - Subtract polynomials [2 pts]

Subtract $(4x^2 - x + 9) - (x^2 + 6x - 3)$.

Question 4 - Monomial times polynomial [2 pts]

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

Question 5 - Binomial product [2 pts]

Multiply $(x+5)(x-2)$.

Question 6 - FOIL with coefficients [2 pts]

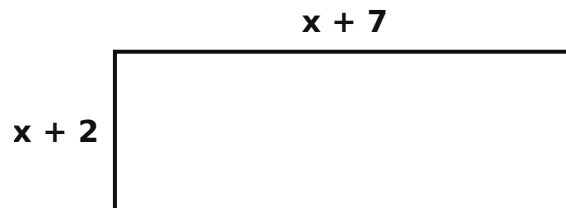
Multiply $(3x-2)(2x+5)$.

Question 7 - Special products [3 pts]

Part	Expression
a	$(x + 9)^2$
b	$(x - 6)(x + 6)$

Expressions for question 7.

- a. Expand $(x+9)^2$. (1 point)
- b. Multiply $(x-6)(x+6)$. (1 point)
- c. Explain why $(x+9)^2$ is not x^2+81 . (1 point)

Question 8 - Rectangle area [3 pts]

Rectangle for question 8.

A rectangle has length $x+7$ and width $x+2$.

- a. Write its area as a polynomial in standard form. (2 points)
- b. Find the area when $x=3$. (1 point)

Question 9 - Closure [2 pts]

Show that $(2x^2+x)+(3x^2-x)$ is a polynomial. What does this example illustrate about polynomials?