# Practice Test for Polynomial Unit

**Learning Objectives:**

1. Simplify expressions using exponents.
2. Identify whether an equation is an identity.
3. Add and subtract polynomial functions.
4. Multiply polynomial functions.

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| **Question #** | **Learning Objective** | **Know It** | **Feel Unsure** |  | **Right** | **Wrong** | **Simple Mistake** | **Need to Study** |
| 1 | A |  |  |  |  |  |  |  |
| 2 | B |  |  |  |  |  |  |  |
| 3 | C |  |  |  |  |  |  |  |
| 4 | D |  |  |  |  |  |  |  |

1. Simplify: $\left(3x^{2}yz^{3}\right)^{2}(-4xyz^{5})^{3}$
2. Which of these equations are identities? How do you know?

 a) $\left(x+3\right)^{2}=x^{2}+9$ b)$ x^{2}-9=\left(x+3\right)(x-3)$ c) $2\left(x-3\right)=2x+6$

1. Given $f\left(x\right)=5x^{4}-3x^{3}+5x-3$ and $g\left(x\right)=2x^{4}+6x^{2}-7x-3$, find $f\left(x\right)+g(x)$and $f\left(x\right)-g(x)$.
2. Given $f\left(x\right)=3x+4$ and $g\left(x\right)=x^{2}-3x-7$, find $f\left(x\right)∙g(x)$.