Name: _____ Hour :_____ Date: _____

HONORS Proving and Verifying Polynomial Identities Practice

For each polynomial identity:

(a) Prove algebraically (like we did in the notes!)

(b) Verify the identity *numerically* – To verity numerically pick a non-zero value for each *a, b, c* etc, and use the order of operations to show that you get the same value on each side of the identity.

1) $(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$

2) $(c-2d)(c-d) = c^2 - 3cd + 2d^2$

Verify <u>numerically</u> whether the following is a polynomial identity.

3) $(c+d)^2(c-d) \stackrel{?}{=} c^3 + 2c^2d - cd + d^3$

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