FACTORING POLYNOMIALS – 2. FACTORING (a≠1) & ADVANCED

Name:

Date:

Please remember to show/communicate all your work. You DO NOT need to answer every question, two correct answers at any level will demonstrate a student's level of attainment.

LEGEND						
✓	M	✘	S	N	G	H
correct	mostly correct	incorrect	silly mistake	did not know how to start or skipped	with group	got help

	Mild (🌶🌶)		Medium (🌶🌶🌶)		Spicey (🌶🌶🌶🌶)
Questions	#1	#2	#3	#4	#5
Results					

---

1. Factor the following:

(a) $30x^2 + 3xy - 6y^2$

(b) $6x^3 - x^2 - 12x$

2. Fill in the blanks to make the following statements factorable.

(a) $3x^2 + \square x + 8$

(b) $2x^2 + 3x + \square$

FACTORING POLYNOMIALS – 2. FACTORING (a≠1) & ADVANCED

3. Without duplicating numbers, use the number 1 to 9 to build different quadratic expressions that can be factored using integers. Explain some of the steps you took to solving, your initial thoughts/attempts, and include any rough work to help show your thinking.

$4x^2 + \square x + \square = \_\_\_\_\_$

$4x^2 + \square x - \square = \_\_\_\_\_$

$4x^2 - \square x + \square = \_\_\_\_\_$

$4x^2 - \square x - \square = \_\_\_\_\_$

FACTORING POLYNOMIALS – 2. FACTORING (a≠1) & ADVANCED

4. Using the digits 0 to 9 (at most one time each), place a digit in each box to make the statement true. Explain some of the steps you took to solving, your initial thoughts/attempts, and include any rough work to help show your thinking.

$$\frac{\square\square x^2 + \square\square x + \square\square}{\square x + \square} = 2x + 5$$

5. Factor the following.

(a) $x^2 + 4xy + 4y^2 - 4z^2$

(b) $(2x + 3)^2 + 2(2x + 3) - 15$