

First Name: _____

Last Name: _____

13 - EQ - 5.1 Multiplying and Simplifying Polynomials

Q1: The expression $4x(x - 9)$ can be written in the form $ax^2 - bcx$, where a , b and c are __, __, and __.

(Record your three digit answer in the Numerical Response boxes below)

4	3	6	
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$$4x(x-9)$$

$$4x^2 - 36x \Rightarrow \begin{matrix} a=4 \\ b=3 \\ c=6 \end{matrix}$$

	x	-9
$4x$	$4x^2$	$-36x$

Q2: The expression $(3x + 1)(x + 2)$ can be written in the form $ax^2 + bx + c$, where a , b , and c are __, __, and __.

(Record your three digit answer in the Numerical Response boxes below)

3	7	2	
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$$(3x+1)(x+2)$$

$$3x^2 + 6x + 1x + 2$$

$$3x^2 + 7x + 2 \Rightarrow \begin{matrix} a=3 \\ b=7 \\ c=2 \end{matrix}$$

	x	$+2$
$3x$	$3x^2$	$+6x$
$+1$	$+1x$	$+2$

$$3x^2 + 7x + 2$$

Q3: (Long Answer) Simplify the expression $3x^4y(3x - 2y^2)$ (1 mark)

$$9x^5y - 6x^4y^3$$

	$3x$	$-2y^2$
$3x^4y$	$9x^5y$	$-6x^4y^3$

■ KEY ■

Q4: (Long Answer) Simplify the expression $(2x - 3)(x + 6) - (x - 2)^2$ (3 marks)

	x	+6
2x	2x ²	+12x
-3	-3x	-18

$$(2x-3)(x+6) - (x-2)(x-2)$$

$$(2x^2 + 12x - 3x - 18) - (x^2 - 2x - 2x + 4)$$

$$(2x^2 + 9x - 18) - (x^2 - 4x + 4)$$

$$\underline{2x^2 + 9x - 18} - \underline{x^2 + 4x - 4}$$

$$\boxed{x^2 + 13x - 22}$$

	x	-2
x	x ²	-2x
-2	-2x	+4

MARKING

Beginning	0.0 – 2.5
Progressing	3.0 – 4.0
Competent	4.5 – 5.5
Exemplary	6.0