NAME _____ QUARTER 1

GRADE & SECTION _____ DATE _____

Activity: Synthetic Division

Divide the polynomials using synthetic division. Complete the table and quotient by filling in the blanks. The first item is done for you.

1. $(x^3 - 9x^2 + 27x - 27) \div (x - 3)$

	x^3	x^2	x	c
3	1	−9	27	−27
		3	−18	27
	☐	☐	☐	☐
	x^2	x	c	r

Answer: x^2 ☐☐ x ☐☐

2. $(x^3 + 3x^2 - 6x - 8) \div (x - 2)$

	x^3	x^2	x	c
2	1	3	−6	−8
		2	10	8
	☐	☐	☐	☐
	x^2	x	c	r

Answer: x^2 ☐☐ x ☐☐

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3. $(3x^4 - 5x^3 - 5x^2 + 4x - 27) \div (x + 1)$

	x^4	x^3	x^2	x	c
−1	3	−5	−5	4	4
		−3	8	−3	−1
	☐	☐	☐	☐	☐
	x^3	x^2	x	c	r

Answer: ☐x^3 ☐☐x^2 ☐☐x ☐☐ ☐ $\frac{☐}{x+1}$

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4. $(x^4 - 16) \div (x + 2)$

	x^4	x^3	x^2	x	c
−2	1	☐	☐	☐	☐
		−2	4	−8	16
	☐	☐	☐	☐	☐
	x^3	x^2	x	c	r

Answer: x^3 ☐☐ x^2 ☐☐ x ☐☐

5. $(2x^2 - 3x - 1) \div (x - 1)$

	x^2	x	c
1	2	−3	−1
		☐	☐
	☐	☐	☐
	x	c	r

Answer: ☐x ☐☐ ☐ $\frac{☐}{x+1}$

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LIVEWORKSHEETS