Algebra 2                                    Name: _____
Long Division                                Date: _____

Use polynomial long division to divide. You must show the correct math to earn credit for a correct answer.

| | |
|---|---|
| 1. $$(9x + 12) \div (3x + 5)$$ | 2. $$(4x - 8) \div (x - 2)$$ |
| 3. $$(6x^2 - 5x - 25) \div (3x + 5)$$ | 4. $$(5x^2 + 12x + 14) \div (-5x + 3)$$ |

**5.**

$$(6x^2 - 3x + 18) \div (2x - 7)$$

**6.**

$$(12x^2 - 11) \div (3x^2 + 4x - 1)$$

**7.**

$$(8x^2 + x - 6) \div (2x^2 + 9)$$

**8.**

$$(21x - 10x^2 + 6) \div (-5x + 3)$$

Answers randomly placed in this table. Cross them out as you go. ☺

| | | | |
|---|---|---|---|
| $3x + 9 + \dfrac{81}{2x - 7}$ | $4 + \dfrac{x - 42}{2x^2 - 9}$ | $2x - 5$ | $3 + \dfrac{-3}{3x + 5}$ |
| $4$ | $4 + \dfrac{-16x - 7}{3x^2 + 4x - 1}$ | $-x - 3 + \dfrac{23}{-5x + 3}$ | $2x - 3 + \dfrac{15}{-5x + 3}$ |