

Long Division Homework

Name: _____

Use long division to divide each expression.

$$1) \frac{x^4 + 3x^3 - x^2 - x + 6}{x + 3}$$

$$2) \frac{x^4 - 12x - 42}{x^2 - x - 6}$$

$$3) (3x^4 - x^3 + 8x^2 + 5x + 3) \div (x^2 - x + 3)$$

$$4) \frac{27x^3 - 3x - 8}{3x^2 - 1}$$

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

$$6) \frac{x^3 + 3x - 10}{x - 2}$$

$$7) \frac{6x^3 + 7x^2 + 12x}{3x - 1}$$

$$8) (4x^3 + 2x + 1) \div (4x^2 + 8x - 3)$$

$$9) \frac{5x^4 - 3x^2 + 2}{x^2 - 3x + 5}$$

$$10) (3x^4 - 2x^3 + 2) \div (x^2 - 1)$$