

Show all work and simplify all answers before circling/boxing them. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for full credit.

**Due next class.** Students who turn assignments in late (or do not attempt a problem) forfeit their ability to rewrite those problems for credit.

(1) Divide  $\frac{3x^4-6x^2-9}{3x^3}$

(2) Divide  $\frac{2x^4-3x^2+4x-7}{-x}$

(3) Divide  $(x^4 - 3x^3 - x + 3) \div (x - 3)$

(4) Divide  $(20x^4 + 6x^3 - 2x^2 + 15x - 2) \div (5x - 1)$

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

(6) Divide  $(3x^4 - 2x^2 - 5) \div (3x^2 - 5)$

(7) Divide  $\frac{x^2-3x+1}{x-2}$

(8) Divide  $\frac{x^2-2x+1}{x+4}$

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

(10) Divide  $(x^5 + x^4 + 2x + 2) \div (x + 1)$