Find all the zeros of the polynomial.

$$b^3 - 3b^2 - 7b + 21$$

Find all the zeros of the polynomial.

$$3r^3 - 6r^2 + 4r - 8$$

Special Factoring

1. $x^4 + 27x$

2. $x^4 - 8x^2 + 16$

3. $x^4 + x^2 - 12$

Solve the inequality using a sign chart. Write answer in interval notation.

$$-(x-2)(x+5)(x+8)(-2x+7) < 0$$

Solve the inequality using a sign chart. Write answer in interval notation.

Given: 2 *(multiplicity 2)* is a zero of the polynomial

$$x^4 - 4x^3 + 3x^2 + 4x - 4 \leq 0$$

Add or subtract as indicated. Write answer in standard form.

$$(4 + \sqrt{-4}) - (3 - \sqrt{-9})$$

$$(-2 + \sqrt{-12}) + (3 - \sqrt{-27})$$

Multiply. Write answers in standard form.

$$(2 - 3i)(2 + 3i)$$

$$(6 + 2i)(3 - 5i)$$

Simplify

$$\frac{-3}{2i}$$

$$\frac{2+3i}{3-4i}$$

Given 2i is a zero, find the remaining zeros for the polynomial

$$f(x) = x^4 + 3x^3 - 6x^2 + 12x - 40$$

Given 3i is a zero, find the remaining zeros for the polynomial

$$g(x) = x^4 - 81$$