Algebra II

Remainder Theorem -

(pg 375)

Use synthetic substitution to find $P(c)$ for the given polynomial for the given c.

1) $P(x) = x^3 - 2x^2 - 5x - 7$; $c = 4$

Factor Theorem -

Use the factor theorem to determine whether the binomial is a factor of $P(x)$.

9) $x + 1$; $P(x) = x^7 - x^5 + x^3 - x$

A root of the equation is given. Solve the equation.

17) $x^3 + 3x^2 - 3x - 9 = 0$; -3

Find a polynomial equation with integral coefficients that has the given roots.

21) { 1, 2, -3 }

Solve each equation given the two indicated roots.

29) $x^4 - 3x^3 - 8x^2 + 12x + 16$ { -1, 4,   }