

Name _____
Mr. Schlansky

Date _____
Algebra II



Finding k in a Polynomial Equation

1. Consider the polynomial $p(x) = x^3 + kx^2 + x + 6$. Find a value of k so that $x + 1$ is a factor of P .

2. Consider the polynomial $p(x) = x^3 + kx - 30$. Find a value of k so that $x + 3$ is a factor of P .

3. Given $p(x) = 6x^3 + 31x^2 + kx - 12$, and $x + 4$ is a factor, find the value of k .

4. Given $z(x) = 6x^3 + bx^2 - 52x + 15$, and $x + 5$ is a factor, find the value of b .

5. Given $p(x) = x^3 + 5x^2 + kx - 24$, and $x + 3$ is a factor, find the value of k .

6. If $x - 1$ is a factor of $x^3 - kx^2 + 2x$, what is the value of k ?

7. The polynomial function $g(x) = x^3 + ax^2 - 5x + 6$ has a factor of $(x - 3)$. Determine the value of a .

8. Consider the polynomial $p(x) = x^3 + kx + 2$. Find a value of k so that $x - 2$ is a factor of P .