

Name: _____

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1. Given $P(x) = x^3 - 3x^2 - 2x + 4$, which statement is true?

1. $(x - 1)$ is a factor because $P(-1) = 2$.
2. $(x + 1)$ is a factor because $P(-1) = 2$.
3. $(x + 1)$ is a factor because $P(1) = 0$.
4. $(x - 1)$ is a factor because $P(1) = 0$.

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

1. 0
2. 2
3. 3
4. -3

3. Given $g(x) = x^4 + 2x^3 - 7x^2 - 8x + 12$. When $g(x)$ is divided by $x - 1$, which conclusion about $g(x)$ is true?

1. $g(1) = 0$
2. $g(-1) = 0$
3. $x + 1$ is a factor of $g(x)$.
4. No conclusion can be made regarding $g(x)$.

4. If $p(x) = 2x^3 - 5x^2 - 9x + 18$, what is the remainder of $p(x) \div (x - 2)$?

1. -54
2. -4
3. 0
4. 44

5. Which binomial is *not* a factor of the expression $x^3 - 11x^2 + 16x + 84$?

1. $x + 2$
2. $x + 4$
3. $x - 6$
4. $x - 7$