

Name : _____

Factoring Polynomials - Synthetic Division

Sheet 2

Apply synthetic division method to factorize each polynomial.

1) $n^5 - 82n^3 + 81n$

2) $2p^3 + p^2 - 7p - 6$

3) $u^4 - 11u^3 + 41u^2 - 6$

- 48

5) $72s^2 + 24s - 6$

$v^2 + 20v + 4$

PREVIEW

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1) Determine whether $2d + 1$ is a factor of $16d^6 - 32d^5 - 4d^4 + 48d^3 + 8d^2 - 6d$.

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Answer key

Sheet 2

Factoring Polynomials - Synthetic Division

Apply synthetic division method to factorize each polynomial.

1) $n^5 - 82n^3 + 81n$

2) $2p^3 + p^2 - 7p - 6$

$n(n + 9)(n - 9)(n + 1)(n - 1)$

$(p + 1)(p - 2)(2p + 3)$

3) $u^4 - 11u^3 + 41u^2 - 6$

PREVIEW

- 48

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$(u - 3)(u - 1)(u - 2)$

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- 2)

5) $72s^2 + 24s - 6$

$v^2 + 20v + 4$

$6(2s + 1)(6s - 1)$

$(v + 1)(3v + 2)(2v + 1)(v + 2)$

1) Determine whether $2d + 1$ is a factor of $16d^6 - 32d^5 - 4d^4 + 48d^3 + 8d^2 - 6d$.

Yes, $2d + 1$ is a factor of $16d^6 - 32d^5 - 4d^4 + 48d^3 + 8d^2 - 6d$.