

LESSON 4.4 Assignment

Name _____ Date _____

Break It Down
Factoring Higher Order Polynomials

1. Completely factor $25x^2 - 10x - 24$ over the set of real numbers.
2. Completely factor $x^3 - 4x^2 - 9x + 36$ over the set of real numbers.
3. Completely factor $x^4 - 25x^2 + 144$ over the set of real numbers.
4. Completely factor $27x^3 - 18x^2 + 3x$ over the set of real numbers.
5. Completely factor $16x^3 + 54$ over the set of real numbers.
6. Completely factor $7x^4 - 56x$ over the set of real numbers.

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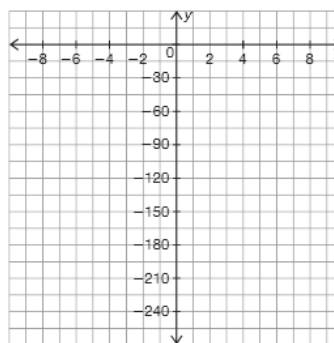
7. Consider the function $f(x) = 4x^3 - 12x^2 + 9x - 2$.

a. Complete the table of values.

x	-2	-1	0	1	2
$f(x)$					

b. Completely factor $f(x)$ over the set of real numbers.

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8. Consider the function $h(x) = x^4 + 3x^3 - 17x^2 + 3x - 18$.a. Describe how to determine one of the factors of $h(x)$ in order to begin factoring the function.b. Completely factor $h(x)$ over the set of real numbers.

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