Name _____ Date _____ Class _____

# Practice B
## *Factoring Polynomials*

**Determine whether the given binomial is a factor of the polynomial P(x).**

**1.** $(x - 4)$; $P(x) = x^2 + 8x - 48$

**2.** $(x + 5)$; $P(x) = 2x^2 - 6x - 1$

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**3.** $(x - 6)$; $P(x) = -2x^2 + 15x - 18$

**4.** $(x + 3)$; $P(x) = 2x^2 - x + 7$

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**Factor each expression.**

**5.** $2x^4 + 2x^3 - x^2 - x$

**6.** $4x^3 + x^2 - 8x - 2$

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**7.** $5x^6 - 5x^4 + x^3 - x$

**8.** $2x^4 + 54x$

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**9.** $64x^3 - 1$

**10.** $3x^4 + 24x$

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**Solve.**

**11.** Since 2006, the water level in a certain pond
has been modeled by the polynomial
$d(x) = -x^3 + 16x^2 - 74x + 140$, where the depth
$d$, is measured in feet over $x$ years. Identify the
year that the pond will dry up. Use the graph to
factor $d(x)$.



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