# Lesson 4.4 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_

**Factor the polynomial completely.**

|  |  |
| --- | --- |
| 1. y3 – 2y2 – 24y
 | 1. 9p7 – 36p5
 |
| 1. 2k4 – 242k2
 | 1. x3 + 27
 |

|  |  |
| --- | --- |
| 1. y3 + 1000
 | 1. w3 – 125
 |
| 1. 36p4 - 25
 | 1. y4 - 16

 |
| 1. y3 – 3y2 + 4y – 12
 | 1. c3 – 6c2 – 9c + 54

 |

**Determine whether the binomial is a factor of the polynomial.**

|  |  |
| --- | --- |
| 1. f(x) = 3x3 + 7x2 – 8x – 5; **x + 5**
 | 1. f(x) = 2x3 + 15x2 – 23x + 36; **x + 9**
 |
| 1. f(x) = 6x5 – 8x4 – 6x3 – 4x2; **x – 2**
 | 1. f(x) = 12x3 – 69x2 + 39x + 30; **x – 6**
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