Name _____

7-4 Additional Practice

Factoring Polynomials

Find the GCF of the terms of each polynomial.

1. $6x^2 + 10$

2. $12x^2 - 16x$

3. $-24y^4 + 30y^3$

4. $4x^2y - 8xy^2$

5. $6x^2y^3 + 9xy^2$

6. $-15x^4y^2 - 25x^3y^3$

Factor out the GCF from each polynomial.

7. $4x^2 - 8x - 6$

8. $8x^3 + 12x^2 - 4x$

9. $-3y^2 + 9y - 3$

10. $2x^2y - 4xy + 6xy^2$

11. $12x^4 - 16x^3 + 8x^2 - 28x$

12. $4x^2 + 6xy - 14y^2$

13. Explain why the terms of the polynomial $y^2 + 7$ are said to be relatively prime.

14. Write a trinomial of degree 3 in standard form with a GCF of $6x$. Factor out the GCF from your trinomial.

15. A rectangle has an area of $14y^3 - 35y$.

a. What are expressions for the length and width where one dimension is the GCF?

b. Does a rectangle exist with the given dimensions if $y = 2$? Explain.