



## 7-6 Additional Practice

Factoring  $ax^2 + bx + c$

Factor each trinomial completely.

1.  $2x^2 + 10x + 12$

2.  $3x^3 - 3x^2 - 60x$

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

4.  $6x^2 + 19x + 10$

5.  $4x^2 - 31x + 21$

6.  $8x^2 - 14x - 15$

7.  $6x^2 + 26x + 8$

8.  $12x^3 + 39x^2 - 36x$

9.  $-24x^2 + 20x + 100$

10.  $3x^2 + 9xy + 6y^2$

11.  $2x^2 - 6xy - 8y^2$

12.  $4x^2 - 8xy - 140y^2$

13.  $2x^2 + 15xy + 25y^2$

14.  $6x^2 - 19xy + 15y^2$

15.  $4x^2 + 11xy - 20y^2$

16. Why is it helpful to remove the GCF before factoring using grouping or substitution?

17. A right rectangular prism has a volume of  $6x^3 - 3x^2 - 45x$ .

a. What are expressions for the length, width, and height?

b. What is the least possible integer value of  $x$  for the rectangular solid to exist? Explain.