

## Additional Practice

Factor each polynomial. Check your answer.

1.  $8c^2 + 7c$

2.  $3n^3 + 12n^2$

3.  $15x^5 - 18x$

4.  $-8s^4 + 20t^3 - 28$

5.  $6n^6 + 18n^4 - 24n$

6.  $-5m^4 - 5m^3 + 5m^2$

7. A ball is hit vertically into the air using a paddle at a speed of 32 ft/sec. The expression  $-16t^2 + 32t$  gives the ball's height after  $t$  seconds. Factor this expression.

8. The area of Margo's laptop computer screen is  $12x^2 + 3x$  in<sup>2</sup>. Factor this polynomial to find expressions for the dimensions of her computer screen.

Factor each expression.

9.  $3m(m + 5) + 4(m + 5)$

10.  $16b(b - 3) + (b - 3)$

Factor each polynomial by grouping.

11.  $2x^3 + 8x^2 + 3x + 12$

12.  $4n^3 + 3n^2 + 4n + 3$

13.  $10d^2 - 6d + 35d - 21$

14.  $12n^3 - 15n^2 - 8n + 10$

15.  $5b^4 - 15b^3 + 3 - b$

16.  $t^3 - 5t^2 + 10 - 2t$