In Exercises 3–8, factor the polynomial. (See Example 1.)

3.
$$3x^2 + 3x - 6$$

4.
$$8v^2 + 8v - 48$$

5.
$$4k^2 + 28k + 48$$
 6. $6y^2 - 24y + 18$

6.
$$6y^2 - 24y + 18$$

7.
$$7b^2 - 63b + 140$$
 8. $9r^2 - 36r - 45$

8.
$$9r^2 - 36r - 45$$

In Exercises 9-16, factor the polynomial.

(See Examples 2 and 3.)

9.
$$3h^2 + 11h + 6$$

9.
$$3h^2 + 11h + 6$$
 10. $8m^2 + 30m + 7$

11.
$$6x^2 - 5x + 1$$

11.
$$6x^2 - 5x + 1$$
 12. $10w^2 - 31w + 15$

13.
$$3n^2 + 5n - 2$$
 14. $4z^2 + 4z - 3$

14.
$$4z^2 + 4z - 3$$

15.
$$8g^2 - 10g - 12$$

15.
$$8g^2 - 10g - 12$$
 16. $18v^2 - 15v - 18$

In Exercises 17–22, factor the polynomial.

(See Example 4.)

17.
$$-3t^2 + 11t - 6$$

17.
$$-3t^2 + 11t - 6$$
 18. $-7v^2 - 25v - 12$

19.
$$-4c^2 + 19c + 5$$

19.
$$-4c^2 + 19c + 5$$
 20. $-8h^2 - 13h + 6$

21.
$$-15w^2 - w + 28$$

21.
$$-15w^2 - w + 28$$
 22. $-22d^2 + 29d - 9$