

**Sec. 7.2:** problems 2, 5, 17\*, 19\*, 25.

\* Solve problems 17 and 19 both by applying Theorem 2 and by using partial fractions.

**Sec. 7.3:** problems 3, 5, 8, 14, 27.

**Sec. 7.4:** problem 7.

**Additional problem 1.**

Find the Laplace transform of the function  $g(t) = t^2e^{-5t}$  in two ways:

- (a) by using Theorem 1 from Section 7.3;
- (b) by using Theorem 2 from Section 7.4.

You are allowed to use the table of Laplace transforms on page 446.