1. (§15.2–15.3) Find the Laplace transform of $t^2 \cos(2t + 30°)\, u(t)$.

2. (§15.2–15.3) Find the Laplace transform of $3t^4 e^{-2t} u(t)$.

3. (§15.2–15.3) Find the Laplace transform of $2tu(t) - 4\frac{d}{dt}\delta(t)$.

4. (§15.2–15.3) Find the Laplace transform of $2e^{-(t-1)}u(t)$.

5. (§15.2–15.3) Find the Laplace transform of $5u(t/2)$.

6. (§15.2–15.3) Find the Laplace transform of $6e^{-t/3}u(t)$.

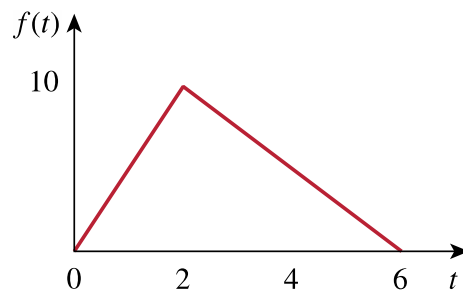7. (§15.2–15.3) Find the Laplace transform of $\frac{d^n}{dt^n}\delta(t)$.

8. (§15.2–15.3) Find the Laplace transform of $2tu(t-4)$.

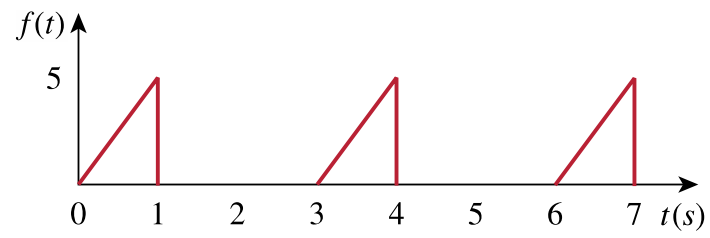9. (§15.2–15.3) Find the Laplace transform of $5 \cos(t)\, \delta(t-2)$.

10. (§15.2–15.3) Find the Laplace transform of $e^{-t} u(t-\tau)$.

11. (§15.2–15.3) Find the Laplace transform of $\sin(2t)\,u(t-\tau)$.

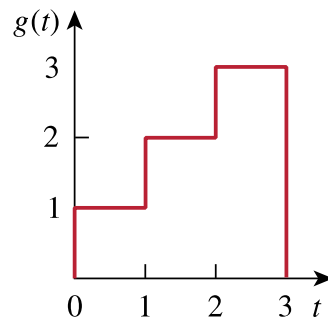12. (§15.2–15.3) Find the Laplace transform of the signal below.

13. (§15.2–15.3) Find the Laplace transform of the signal below.

14. (§15.2–15.3) Find the Laplace transform of the signal below.

15. (§15.2–15.3) Find the Laplace transform of the signal below.