

**Problem 27 in Section 7.1.** Find the inverse Laplace transform of  $F(s) = \frac{3}{s-4}$ .

**Solution.** The fact sheet says that  $\mathcal{L}(e^{at}) = \frac{1}{s-a}$ . It follows that

$$\mathcal{L}^{-1}\left(\frac{3}{s-4}\right) = 3\mathcal{L}^{-1}\left(\frac{1}{s-4}\right) = \boxed{3e^{4t}}.$$