Problem 5 in Section 7.3. Find the inverse Laplace transform of
$F(s) = \frac{3}{2s-4}$.

Solution.

$$\mathcal{L}^{-1}\left(\frac{3}{2s-4}\right) = \frac{3}{2}\mathcal{L}^{-1}\left(\frac{1}{s-2}\right) = \boxed{\frac{3}{2}e^{2t}}.$$