Some Section 8.1 Even Homework Solutions

6. $\displaystyle\int \frac{2t-1}{t^2-t+2}\,dt$

$u = t^2 - t + 2, du = (2t-1)\,dt$

Use $\displaystyle\int \frac{du}{u}$.

10. $\displaystyle\int \frac{-2x}{\sqrt{x^2-4}}\,dx$

$u = x^2 - 4, du = 2x\,dx, n = -\dfrac{1}{2}$

Use $\displaystyle\int u^n\,du$.

8. $\displaystyle\int \frac{2}{(2t-1)^2+4}\,dt$

$u = 2t - 1, du = 2\,dt, a = 2$

Use $\displaystyle\int \frac{du}{u^2+a^2}$.