

Oppgave 25

Fordi $x^2 - 1 \geq 0$ for $x \geq 1$, og $x^2 - 1 < 0$ for $x < 1$, vi deler integralet i tre;

$$\begin{aligned}\int_{-2}^2 |x^2 - 1| dx &= \int_{-2}^{-1} (x^2 - 1) dx + \int_{-1}^1 (1 - x^2) dx + \int_1^2 (x^2 - 1) dx \\ &= \frac{4}{3} + \frac{4}{3} + \frac{4}{3} \\ &= 4\end{aligned}$$