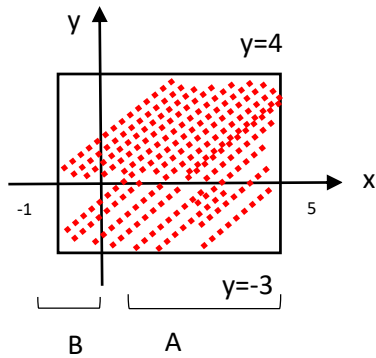


$$\int a \cdot dx = ?$$

Given two lines

$$y = 4, y = -3$$

Find the Area (See the drawing)



$$\begin{aligned} \int_{-1}^5 4dx - \int_{-1}^5 (-3)dx &= \\ = \int_{-1}^5 [4 - (-3)]dx &= \int_{-1}^5 (4 + 3)dx = 7x \Big|_{-1}^5 = 35 - (-7) = 42 \end{aligned}$$

If we want to check

$$7 \cdot 6 = 42$$

$$\text{Area A is } 5 \cdot 7 = 35$$

$$\text{Area B is } 1 \cdot 7 = 7 \quad \Rightarrow 35 + 7 = 42$$