

Onafhankelijk van n

18. Snijpunt $\frac{1}{2}x^2 = x \rightarrow x = 0 \vee x = 2$

$$\begin{aligned} \text{Inhoud} &= \pi \int_0^2 (x^2) - \left(\frac{1}{2}x^2\right)^2 dx = \pi \int_0^2 x^2 - \frac{1}{4}x^4 dx \\ &= \pi \cdot \left[\frac{1}{3}x^3 - \frac{1}{20}x^5 \right]_0^2 = \frac{16}{15} \pi \end{aligned}$$

19. $y' = \frac{1}{n}2x$ In P: $y'(n) = \frac{1}{n} \cdot 2 \cdot n = 2$ onafhankelijk van n

20. Opp W = $\int_0^n \frac{1}{n}x^2 dx = \left[\frac{1}{3n}x^3 \right]_0^n = \frac{1}{3}n^2$

$$\text{Opp V} = n^2 - \frac{1}{3}n^2 = \frac{2}{3}n^2$$

Verhouding $O_w : O_v = \frac{1}{3}n^2 : \frac{2}{3}n^2 = 1 : 2$ onafhankelijk van n