

Oppgave 7

$$f(x) = \frac{1}{8} x^2$$

$$g(x) = \frac{1}{16} x^3$$

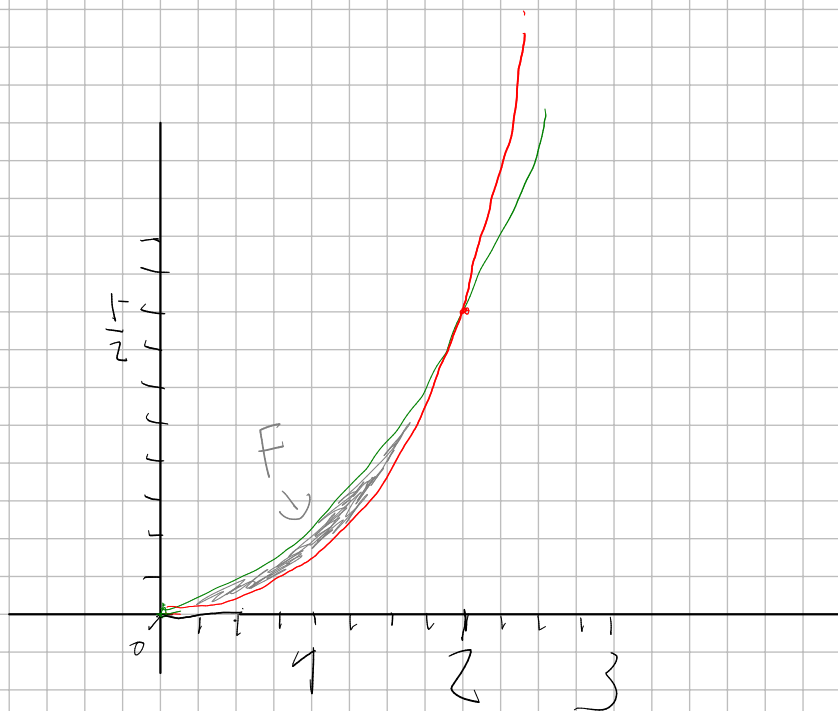
1) Finne nullpunkt:

$$f(x) = g(x)$$

$$\frac{1}{8} x^2 = \frac{1}{16} x^3$$

$$\frac{1}{16} x = \frac{1}{8}$$

$$\underline{x = 2}$$



11)

$$A = \int_0^2 f(x) - g(x) dx$$

$$= \int_0^2 \left(\frac{1}{8} x^2 - \frac{1}{16} x^3 \right) dx = \frac{1}{8} \left[\frac{1}{3} x^3 - \frac{1}{8} x^4 \right]_0^2$$

$$\frac{1}{8} \left[\frac{2^3}{3} - \frac{2^4}{8} \right] = \frac{1}{8} \left(\frac{8}{3} - \frac{16}{8} \right) = \frac{1}{8} \cdot \frac{2}{3} = \underline{\underline{\frac{1}{12}}}$$