

Vervolg b a)

(III)

$$= \int_0^2 (2\sqrt{t} - t^{3/2}) dt = \left[\frac{4}{3} t^{3/2} - \frac{2}{5} t^{5/2} \right]_0^2 =$$

$$= \frac{4}{3} \cdot 2\sqrt{2} - \frac{2}{5} \cdot 4\sqrt{2} = \underline{\underline{\frac{16}{15} \sqrt{2}}}$$

6. b) $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} dx$ $\xrightarrow[\frac{dt}{dx} = \frac{1}{2\sqrt{x}}]{\text{Stel } t = \sqrt{x}}$ $\int 2e^t dt = 2e^t + C$
 $2dt \Leftrightarrow \frac{dx}{\sqrt{x}}$ $= \underline{\underline{2e^{\sqrt{x}} + C}}$

7. Stel $u = x^2$ dan $y(u) = \int_0^u \sqrt{t} e^t dt$

$$\text{Dan } \frac{dy}{dx} = \frac{dy}{du} \cdot \frac{du}{dx} = \sqrt{u} e^u \cdot 2x =$$

$$= x e^{x^2} \cdot 2x = \underline{\underline{2x^2 e^{x^2}}} \quad (x > 0)$$

$$\text{en dan } f'(x) = \underline{\underline{2e^4}}.$$