

LÖSUNG ZU 28:

b)

$$a(t) = 5t + 1$$

$$\int (5t + 1)dt = \frac{5t^2}{2} + t + c$$

$$v(t) = \frac{5t^2}{2} + t + c$$

$$v(1) = 12 \Rightarrow 12 = \frac{5}{2} + 1 + c \Rightarrow c = 8,5$$

$$v(t) = \frac{5t^2}{2} + t + 8,5$$

$$\int \left(\frac{5t^2}{2} + t + 8,5 \right) dt = \frac{5t^3}{6} + \frac{t^2}{2} + 8,5t + c$$

$$s(t) = \frac{5t^3}{6} + \frac{t^2}{2} + 8,5t + c$$

$$s(3) = 60 \Rightarrow 60 = \frac{5 \cdot 3^3}{6} + \frac{3^2}{2} + 8,5 \cdot 3 + c \Rightarrow c = 7,5$$

$$s(t) = \frac{5t^3}{6} + \frac{t^2}{2} + 8,5t + 7,5$$

