

14. Beräkna $\int_0^{\pi/6} (2\sin x + 5)\cos x \, dx$

$$\int_0^{\pi/6} 2\sin x \cos x + 5\cos x \, dx$$

$$\int_0^{\pi/6} \sin 2x + 5\cos x \, dx$$

$$-\frac{\cos 2x}{2} + 5\sin x \Big|_0^{\pi/6}$$

$$-\frac{\cos \frac{2 \cdot \pi}{6}}{2} + 5\sin \frac{\pi}{6} - \left(-\frac{\cos 0}{2} + 5\sin 0 \right)$$

$$-\frac{1}{4} + 5 \cdot \frac{1}{2} + \frac{1}{2} + 0$$

$$\frac{-1 + 10 + 2}{4} = \frac{11}{4}$$