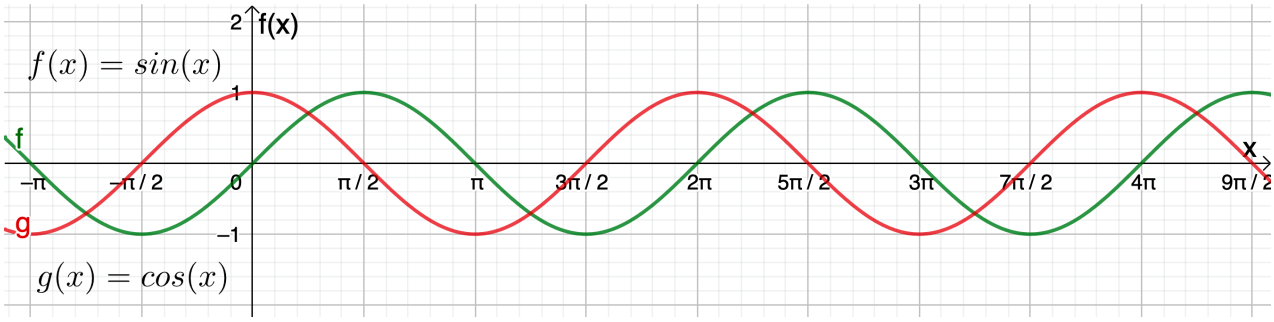
Lösung zu 452:



Es gilt der Zusammenhang: $\cos(x) = \sin\left(x + \frac{\pi}{2}\right)$

a) $f(x) = 3 \cdot \sin\left(x + \frac{\pi}{2}\right) = 3 \cdot \cos\left(x + \frac{\pi}{2} - \frac{\pi}{2}\right) = 3 \cdot \cos(x)$

b) $f(x) = \sin\left(x - \frac{\pi}{2}\right) = \cos\left(x - \frac{\pi}{2} - \frac{\pi}{2}\right) = \cos(x - \pi) = -\cos(x)$

c) $f(x) = 3 \cdot \sin(x + \pi) = 3 \cdot \cos\left(x + \pi - \frac{\pi}{2}\right) = 3 \cdot \cos\left(x + \frac{\pi}{2}\right)$