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Exercise set 6

1 Compute the following trigonometric functions.

a) $\sin\left(\frac{\pi}{3}\right)$

b) $\cos\left(\frac{5\pi}{4}\right)$

c) $\tan\left(\frac{11\pi}{6}\right)$

d) $\sin^2\left(\frac{\pi}{7}\right) + \cos^2\left(\frac{\pi}{7}\right)$

2 Differentiate the following functions.

a) $f(x) = x^2 + 2x + \cos x$

b) $f(x) = e^x \sin(2x)$

c) $f(x) = \tan(e^x)$