

MATH153 - Homework 8

due May 3 at 12.30

1. Find the rate of change of the area of a square whose side is 8 cm long, if the side length is increasing at 2 cm/min
2. Find the following limits.

(a) $\lim_{x \rightarrow \infty} \left(\frac{x+3}{x-3}\right)^x$

(b) $\lim_{x \rightarrow \infty} x^{\frac{1}{x}}$

(c) $\lim_{x \rightarrow 0^+} x \ln(x)$

(d) $\lim_{x \rightarrow \infty} x(\arctan x - \pi/2)$