

1. Let  $f(x) = e^x$

(a) Find  $P_5(x)$ , the Maclaurin polynomial of degree 5 at  $x = 0$

(b) Use your Maclaurin polynomial to approximate  $e^1$

2. Let  $f(x) = \cos(x)$

(a) Find  $P_8(x)$ , the Maclaurin polynomial of degree 8 at  $x = 0$

(b) Use your Maclaurin polynomial to approximate  $\cos(2)$