

# Generalizing the MVT - Taylor's theorem

Session 34

$$\begin{aligned}P(h) &= f(a) + \dots + \frac{f^{(n)}(a)}{h!} (a-a)^h \\ \Rightarrow f(b) - P(b) &= \frac{f^{(n+1)}(c)}{(n+1)!} (b-a)^{n+1} \\ \Rightarrow f\left(\frac{3}{2}\right) - P\left(\frac{3}{2}\right) &= 8\end{aligned}$$