

Generalizing the mvt - Taylor's theorem

Session 34

$$P(x) = f(a) + \dots + \frac{f^{(h)}(a)}{h!} (x-a)^h$$
$$\Rightarrow f(b) - P(b) = \frac{f^{(h+1)}(c)}{(h+1)!} (b-a)^{h+1}$$

$$\Rightarrow f\left(\frac{3}{4}\right) - P\left(\frac{3}{4}\right) = 8$$