

Team 3

PAGE _____

DATE _____

a) $h=0.2$:

$$f''(1.6) = \frac{f(1.8) - 2f(1.6) + f(1.4)}{0.2^2}$$

$$= \frac{-4.286 - 2(-34.233) + 5.798}{0.04}$$

$$= 1749.45$$

b) $h=0.4$:

$$f''(1.6) = \frac{f(2.0) - 2f(1.6) + f(1.2)}{0.4^2}$$

$$= \frac{-2.185 - 2(-34.233) + 2.572}{0.16}$$

$$= 430.33 \quad (\text{As } h \downarrow, \text{ error } \downarrow)$$