

The Derivative at a Point: Graphical Views

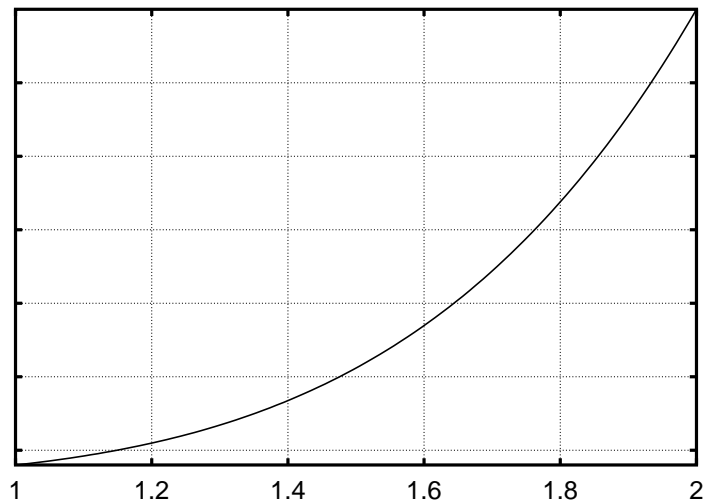


Figure 1: A function

1. Show how to represent the following lengths on Fig. 1.

(a) $f(1.8)$

(b) $f(1.2)$

(c) $f(1.8) - f(1.2)$

(d) $\frac{f(1.8) - f(1.2)}{1.8 - 1.2}$

(e) $f'(1.2)$

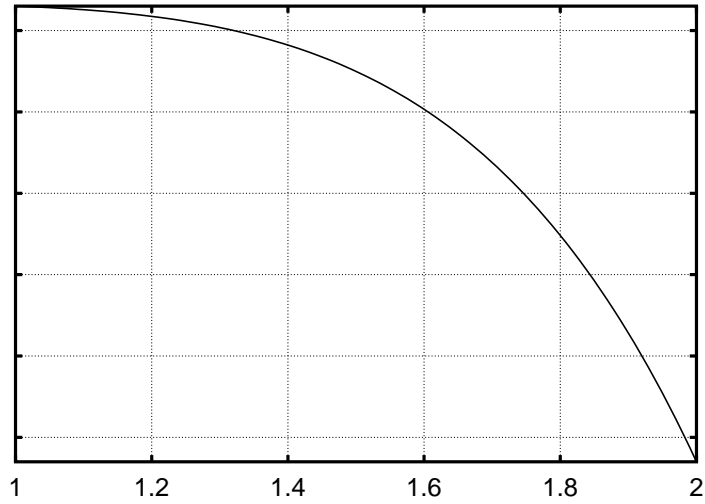


Figure 2: Another function

2. For the function in Fig. 2, determine which of the following pairs of numbers is larger. Note that the y-axis scale might be different than the x-axis scale.
- (a) $f(1.2)$ and $f(1.4)$
 - (b) $f(1.4) - f(1.2)$ and $f(1.6) - f(1.4)$
 - (c) $\frac{f(1.4)-f(1.2)}{1.4-1.2}$ and $\frac{f(1.6)-f(1.4)}{1.6-1.4}$
 - (d) $f'(1.2)$ and $f'(1.6)$