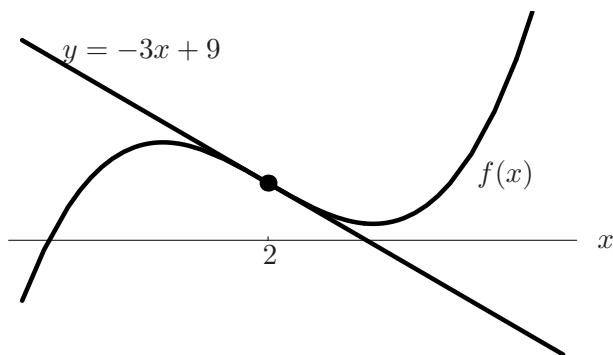


1. (3+3+3+3 points) The figure below shows the tangent line approximation of $f(x)$ near $x = a$.



- (a) What are a , $f(a)$, and $f'(a)$?

$$a = \underline{\hspace{2cm}} \qquad f(a) = \underline{\hspace{2cm}} \qquad f'(a) = \underline{\hspace{2cm}}$$

- (b) Estimate $f(2.1)$. Is this an overestimate or an underestimate? Why?

$$f(2.1) \approx \underline{\hspace{2cm}} \text{ is an } \underline{\hspace{4cm}} \text{ because}$$

- (c) Estimate $f(1.98)$. Is this an overestimate or an underestimate? Why?

$$f(1.98) \approx \underline{\hspace{2cm}} \text{ is an } \underline{\hspace{4cm}} \text{ because}$$

- (d) Would you expect your estimation for $f(2.1)$ or $f(1.98)$ to be more accurate? Why?