

(10 pts) Consider the function $y = 10 + A \cos(bt)$, where b and A are constants with A greater than 20.

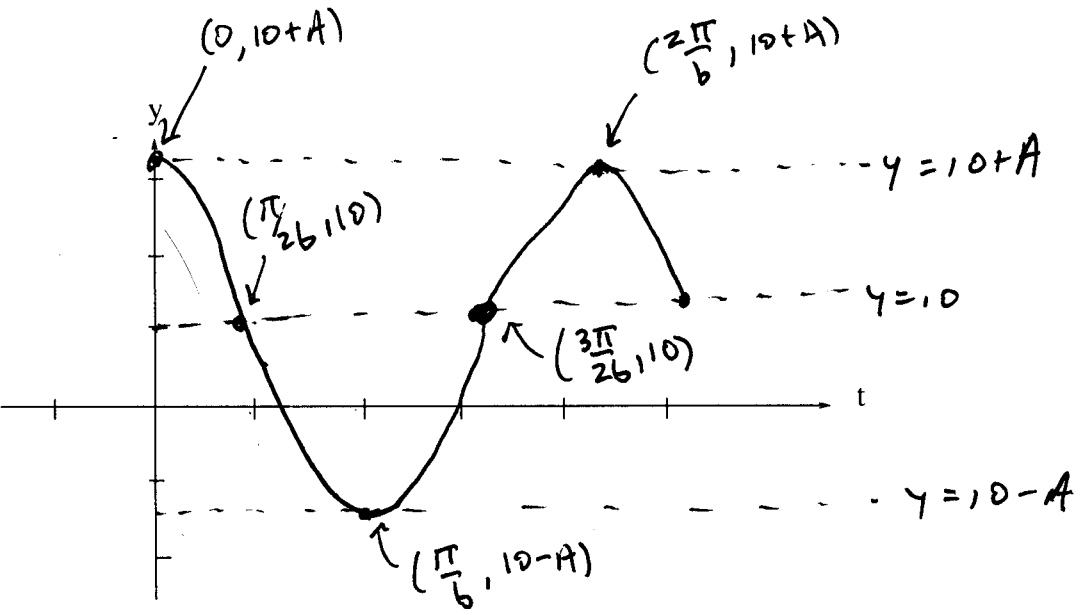
(a) (2 PTS) What is its amplitude?

the amplitude is $A > 20$

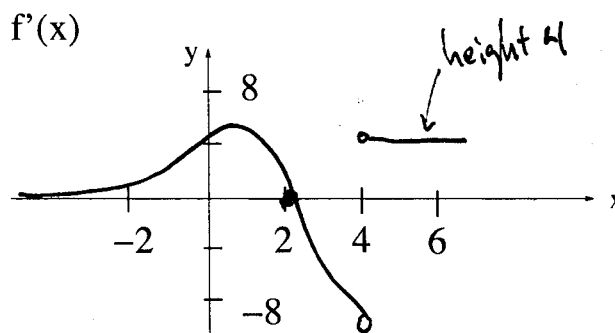
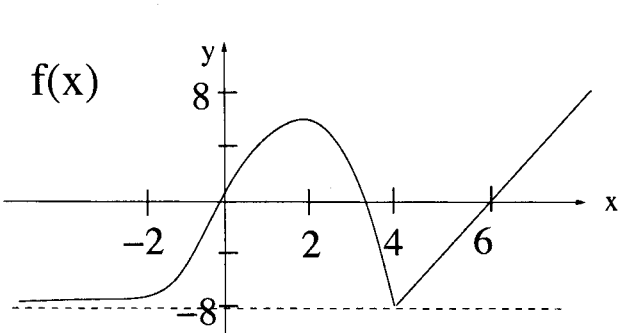
(b) (2 PTS) What is its period?

$$b = \frac{2\pi}{\text{period}} \Rightarrow \text{period} = \frac{2\pi}{b}$$

(c) (6 PTS) Sketch its graph and label significant points on the t-axis and y-axis.



(10 pts) Given the graph of the function below:



(a) (6 PTS) Sketch the graph of its derivative function.

(b) (2 PTS) What is the value of $f''(5)$?

$$f''(5) = 0 \text{ b/c } f' = \text{const. for } x > 4$$

(c) (2 PTS) What do we know about $f'(4)$?

$f'(4)$ DNE b/c right-hand and left hand limits don't agree.