Figure 1, pg 37 of Ostebee/Zorn

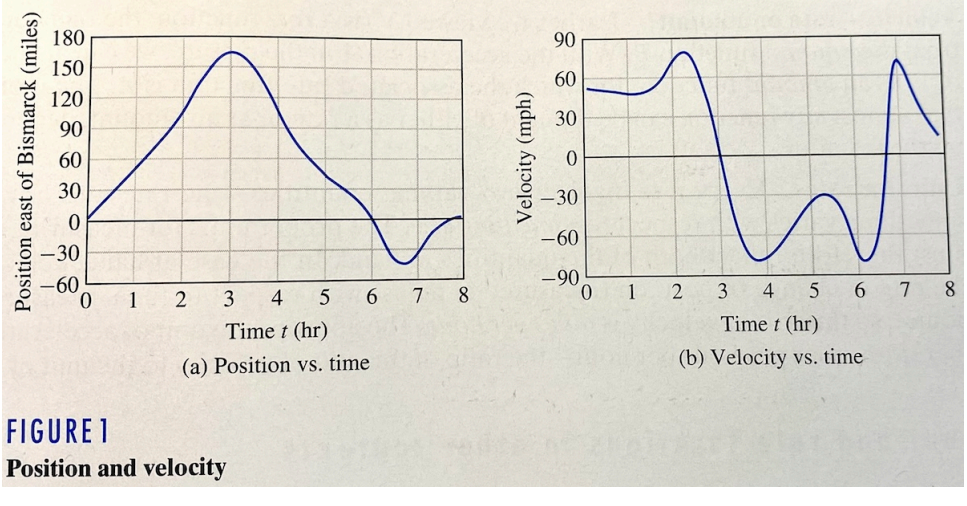
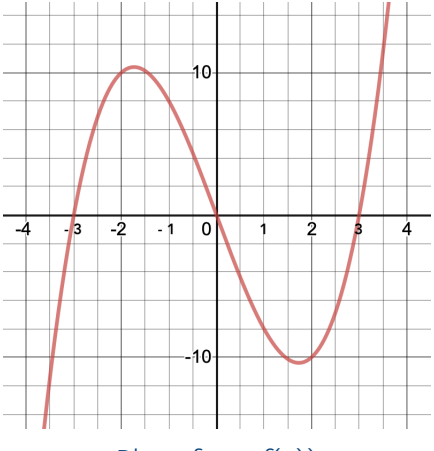


FIGURE 1
Position and velocity

Talk with the people around you for a minute



Plot of $y = f(x)$)

The derivative of f is positive at $x = 2.5$

(a) True, and I can explain why

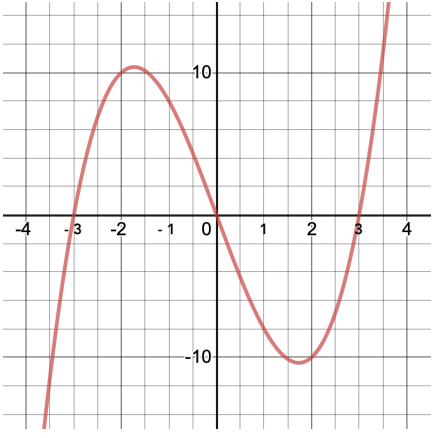
(b) True, but I am unsure why

(c) False, and I can explain why

(d) False, but I am unsure why

(e) Ummmm ...

Talk with the people around you for a minute



Plot of $y = f(x)$)

The derivative of f is negative at $x = -3$

(a) True, and I can explain why

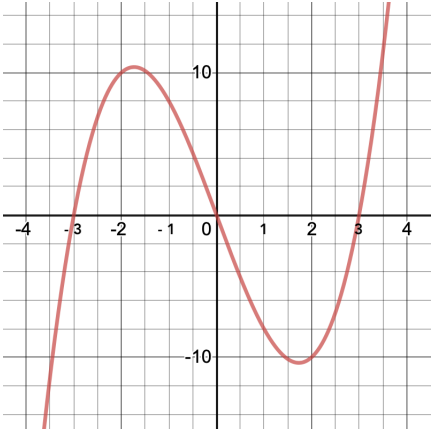
(b) True, but I am unsure why

(c) False, and I can explain why

(d) False, but I am unsure why

(e) Ummmm ...

Talk with the people around you for a minute



Plot of $y = f(x)$)

f' is zero three times on $-4 \leq x \leq 4$

(a) True, and I can explain why

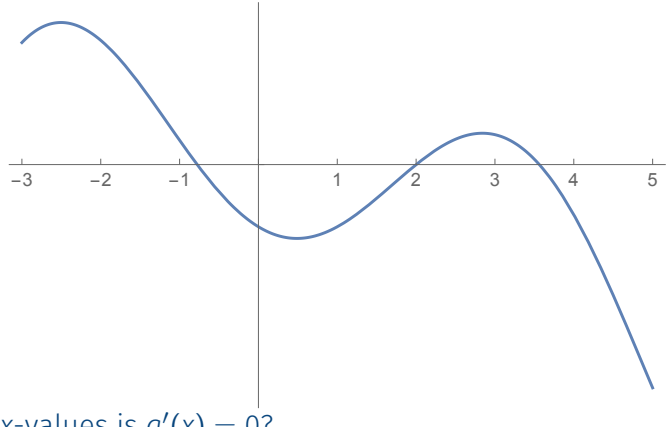
(b) True, but I am unsure why

(c) False, and I can explain why

(d) False, but I am unsure why

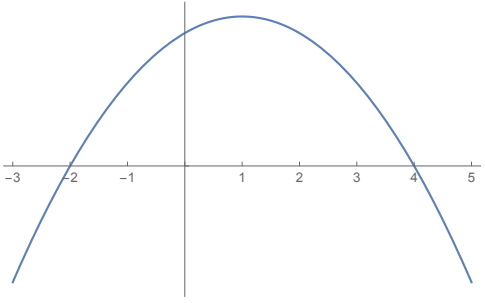
(e) Ummmm ...

The graph of $y = g(x)$ is show below



1. For which x-values is $g'(x) = 0$?
2. On what intervals (of x) is $g(x)$ increasing? decreasing?
3. Use this information to *sketch* a graph of $y = g'(x)$

The graph of $y = h'(x)$ is shown below. *This is NOT the graph of $h(x)$!*



Graph of $y = h'(x)$

4. Where is $h(x)$ increasing? decreasing?

5. Sketch the graph of $y = h(x)$

6. Is the second derivative of $h(x)$ positive or negative at $x = 2$?

7. If $j(x) = h(x) + 3$, how is the graph of $y = j'(x)$ related to the graph of $y = h'(x)$?