

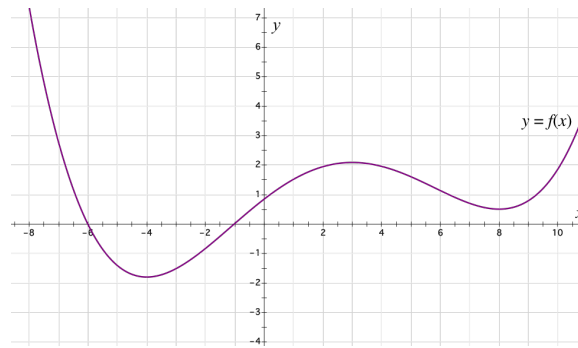
Post Video Questions

SAGE

```
1  nameCheck = function(a,b) {  
2      return a.toLowerCase() != b.toLowerCase();  
3  };
```

Please answer each of these questions to the best of your ability. You are welcome to re-watch parts of any of the videos to help you.

The graph of the function f is shown below.



Problem 1 For this problem, use the graph above.

Learning outcomes:
Author(s):

Post Video Questions

- (a) On the interval $[-6, -4]$, is $f'(x)$: (b) On the interval $[-4, -2]$, is $f'(x)$:

Multiple Choice:

- (i) < 0
- (ii) $= 0$
- (iii) > 0
- (iv) more than one of the above

Multiple Choice:

- (i) < 0
- (ii) $= 0$
- (iii) > 0
- (iv) more than one of the above

- (c) On the interval $[0, 2]$, is $f'(x)$: (d) On the interval $[2, 4]$, is $f'(x)$:

Multiple Choice:

- (i) < 0
- (ii) $= 0$
- (iii) > 0
- (iv) more than one of the above

Multiple Choice:

- (i) < 0
- (ii) $= 0$
- (iii) > 0
- (iv) more than one of the above

Problem 2 For this problem, use the graph above.

- (a) On the interval $[-6, -4]$, is $f'(x)$: (b) On the interval $[-4, -2]$, is $f'(x)$:

Multiple Choice:

- (i) increasing
- (ii) decreasing
- (iii) more than one of the above

Multiple Choice:

- (i) increasing
- (ii) decreasing
- (iii) more than one of the above

- (c) On the interval $[0, 2]$, is $f'(x)$: (d) On the interval $[2, 4]$, is $f'(x)$:

Multiple Choice:

- (i) increasing
- (ii) decreasing
- (iii) more than one of the above

Multiple Choice:

- (i) increasing
- (ii) decreasing
- (iii) more than one of the above

Problem 3 For how many values of x in the interval $[-8, 10]$ does $f'(x) = 0$?

?

Problem 4 From following expressions, identify the smallest and largest according to the numerical value they represent:

Largest:

Smallest:

Multiple Choice:

Multiple Choice:

(a) $f'(8)$

(a) $f'(8)$

(b) $\frac{f(8 + \Delta x) - f(8)}{\Delta x}$ for $\Delta x > 0$

(b) $\frac{f(8 + \Delta x) - f(8)}{\Delta x}$ for $\Delta x > 0$

(c) $f(-6)$

(c) $f(-6)$

(d) $f'(-6)$

(d) $f'(-6)$