



Determine intervals of concavity from a graph

1

At $x = 1$, the function is decreasing.

A $f''(x)$ is positive there

B $f'(x)$ is positive there

C $f'(x)$ is negative there

D $f''(x)$ is negative there

2

$f'(-5) = -30$.

A The function is concave down there.

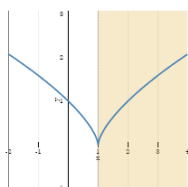
B The function is concave up there.

C The function is increasing there.

D The function is decreasing there.

3

In the highlighted interval, is the concavity positive, negative, or zero?



A Can't be determined

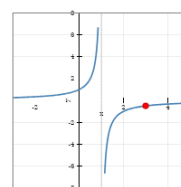
B Zero

C Positive

D Negative

4

At the highlighted point, is $f''(x)$ positive, negative, or zero?



A Negative

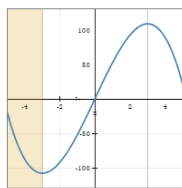
B Zero

C Positive

D Can't be determined

5

In the highlighted interval, what are the signs of $f'(x)$ and $f''(x)$?



A $f'(x)$ negative, $f''(x)$ positive

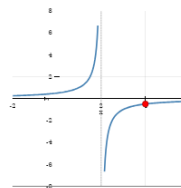
B $f'(x)$ positive, $f''(x)$ negative

C $f'(x)$ positive, $f''(x)$ zero

D $f'(x)$ positive, $f''(x)$ positive

6

At the highlighted point, what are the signs of the slope and the concavity?



A Slope positive, concavity negative

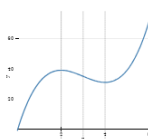
B Slope positive, concavity zero

C Slope positive, concavity positive

D Slope negative, concavity positive

7

On which interval(s) is the concavity positive?



A $(3, 4) \cup (4, \infty)$

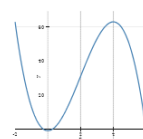
B $(-\infty, 2)$

C $(2, 3)$

D $(-\infty, 2) \cup (2, 3)$

8

On which interval(s) is the concavity negative?



A $(0, 2)$

B $(-\infty, 0) \cup (0, 2)$

C $(-\infty, 0)$

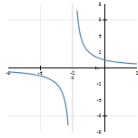
D $(2, 4) \cup (4, \infty)$



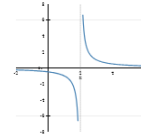
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9

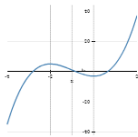
On which interval(s) is the concavity positive?

A $(-\infty, -2)$ B $(-2, \infty)$ **10**

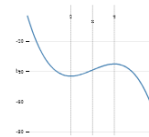
On which interval(s) is the concavity positive?

A $(-\infty, 2)$ B $(2, \infty)$ **11**

On which interval(s) is the concavity positive?

A $(-2, -1)$ B $(-\infty, -2) \cup (-2, -1)$ C $(-1, 0) \cup (0, \infty)$ D $(-\infty, -2)$ **12**

On which interval(s) is the concavity positive?

A $(3, 4) \cup (4, \infty)$ B $(2, 3)$ C $(-\infty, 2)$ D $(-\infty, 2) \cup (2, 3)$