

Name: Miljani Leyva-Benitez

Perm Number:

3154120

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the of the particle at $t = 0$ seconds.

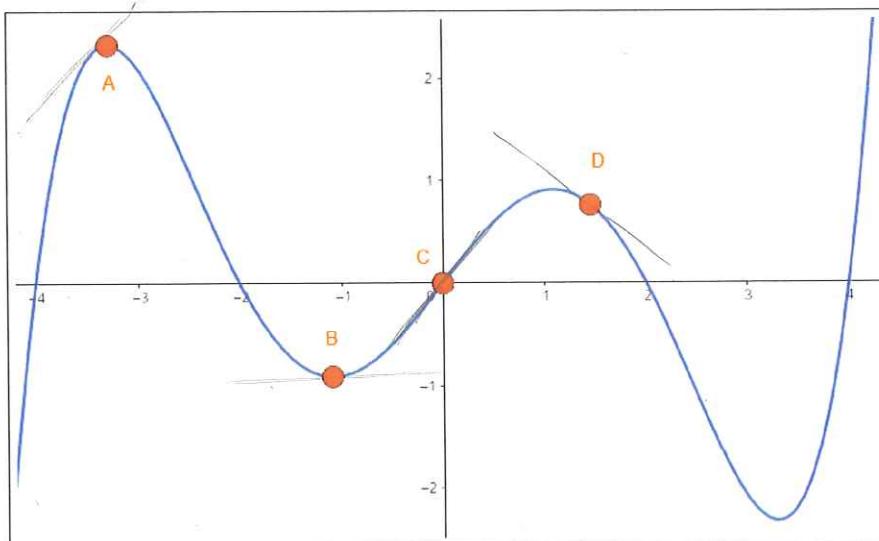
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned}f(t) &= 10e^{3t} - t^3 \\f'(t) &= 30e^{3t} - 3t^2 \\f''(t) &= 90e^{3t} - 6t\end{aligned}$$

$$\begin{aligned}90e^{3(0)} - 6(0) &= 90 \\&= 90 \checkmark\end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \quad m/s^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$$A = -3.$$

$$C = 0$$

$$B = -1$$

$$D = 1$$

A
B

 $g''(x) < 0$

 $g''(x) = 0$

 $g''(x) > 0$

Name: Annalise EvansPerm Number: 5301023TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

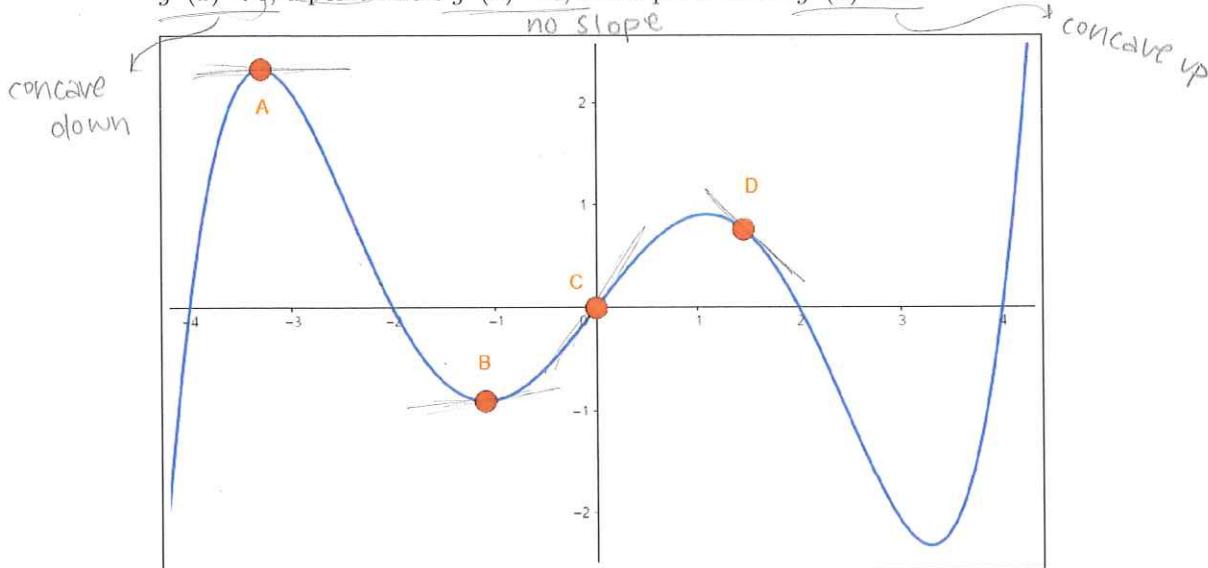
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.

D

$$g''(x) < 0$$

A

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: Anahi PimentelPerm Number: 4205688TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds.

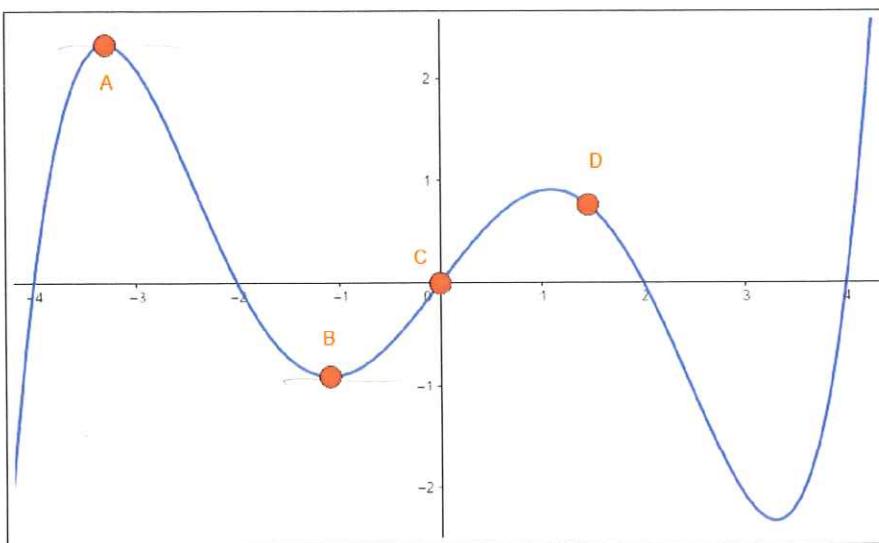
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} f'(t) &= 10(3)e^{3t} - 3t^2 \\ &= 30e^{3t} - 3t^2 \end{aligned}$$

$$\begin{aligned} f''(t) &= 3 \cdot 30e^{3t} - 2 \cdot 3t \\ &= 90e^{3t} - 6t \end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.


C & D
 $g''(x) < 0$
C
 $g''(x) = 0$
B & D
 $g''(x) > 0$

Name: Crystal Mendoza

Perm Number:

4138483

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the **acceleration** of the particle at $t = 0$ seconds.

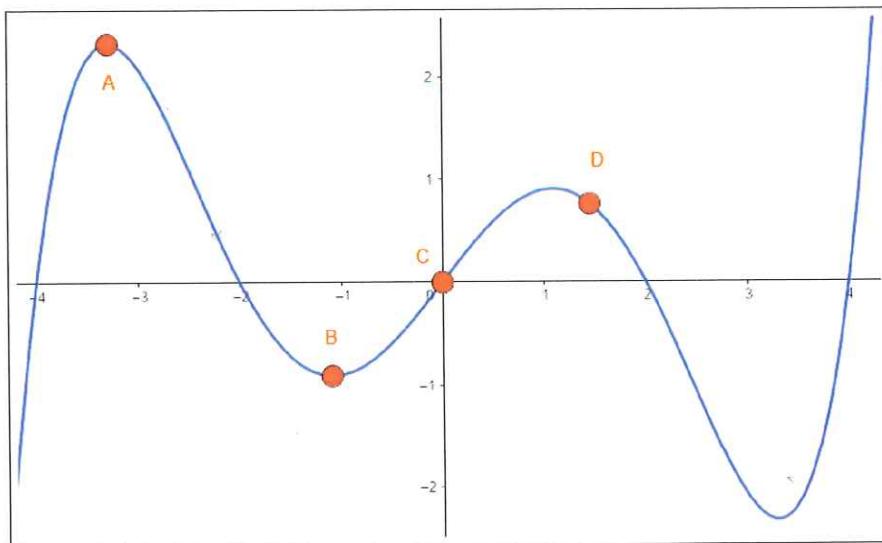
$$\begin{aligned} f(t) &= 10e^{3t} - t^3 \quad \text{position} \\ f'(t) &= 30e^{3t} - 3t^2 \quad \text{velocity} \\ f''(t) &= 90e^{3t} - 6t \\ f''(0) &= 90e^{3(0)} - 6(0)^2 \\ &= 90(1) - 0 \\ &= 90 \end{aligned}$$

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} f(t) &= 10e^{3t} - t^3 \\ f'(t) &= 10 \cdot 3e^{3t} - 3t^2 \\ &= 30e^{3t} - 3t^2 \\ f''(t) &= 90e^{3t} - 6t \end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

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D
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: Sebastian Avila

Perm Number: 5976220

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$10e^{3t} - t^3$$

$$10e^{3t} - t^3$$

$$3(10)e^{3t} - 3t^2$$

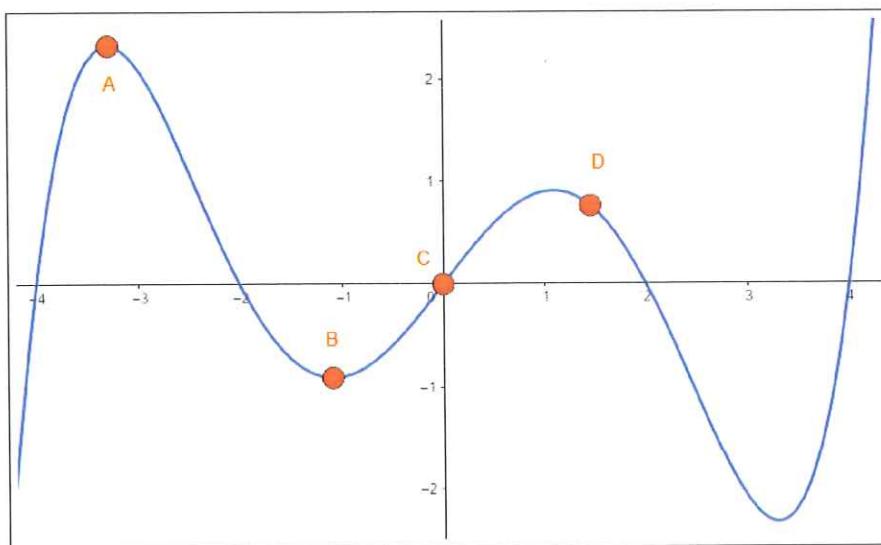
$$30e^{3t} - 3t^2$$

$$3(30)e^{3t} - 6t$$

$$90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

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$$D$$

$$g''(x) < 0$$

$$B$$

$$g''(x) = 0$$

$$C$$

$$g''(x) > 0$$

Name: **Brooke Ryan**

Perm Number:

3857836TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the **acceleration** of the particle at $t = 0$ seconds.

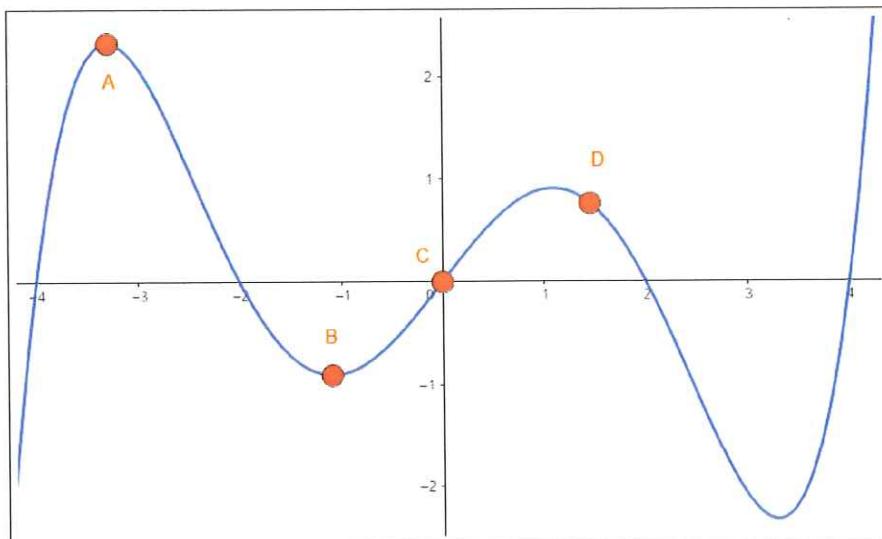
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

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**D**

$g''(x) < 0$

A

$g''(x) = 0$

C

$g''(x) > 0$

$$f(x) = e^{-x} \quad f'(x) = -e^{-x} \quad f''(x) = e^{-x}$$

Name: emily wohrn

Perm Number:

5622949TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

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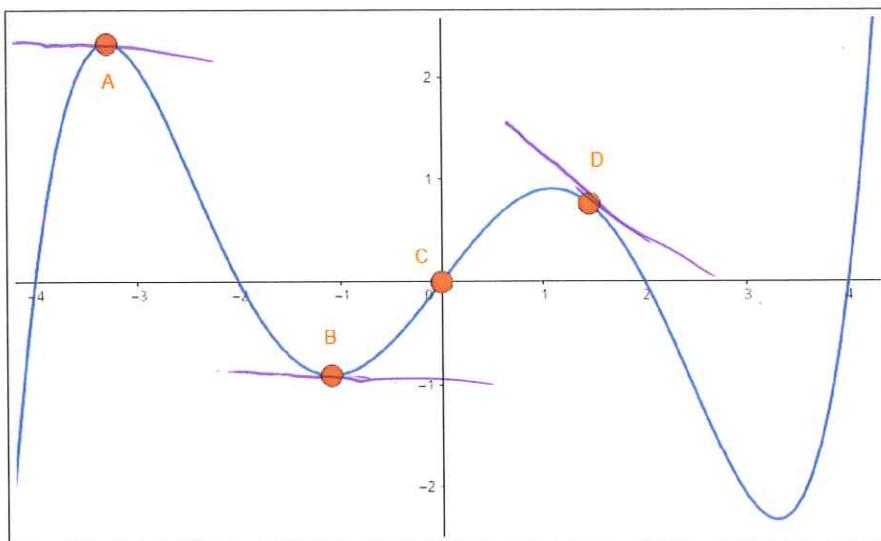
90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

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$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

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$g''(x) > 0$ concave up

$g''(x) < 0$

$g''(x) < 0$ concave down

$g''(x) = 0$

$g''(x) = 0$ neither

$g''(x) > 0$

Name: Zihu ZhuPerm Number: 5381462TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds.

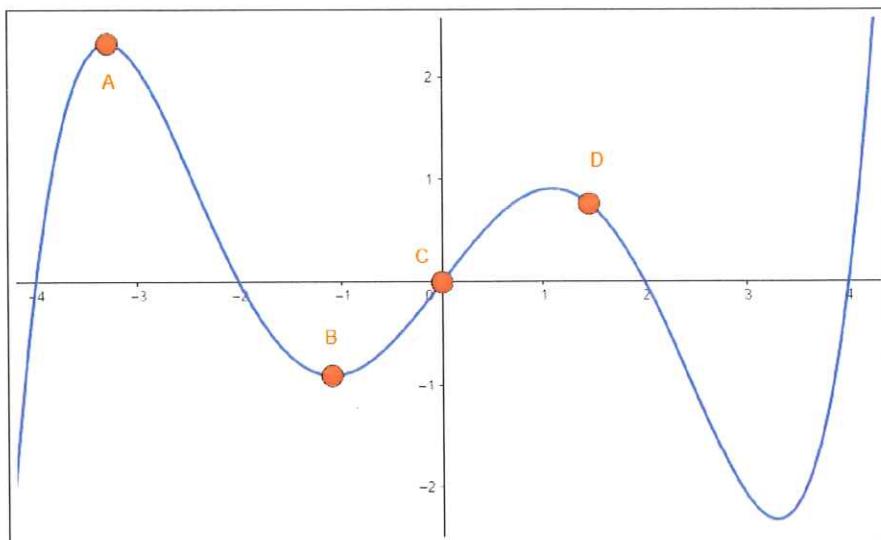
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$30e^{3t} \cdot 3t^2$$

$$90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A D

$$g''(x) < 0$$

~~A B C~~

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: **Stephane Mita** Perm Number: **8038481**

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

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90 is the **acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f(t) = 10e^{3t} - t^3$$

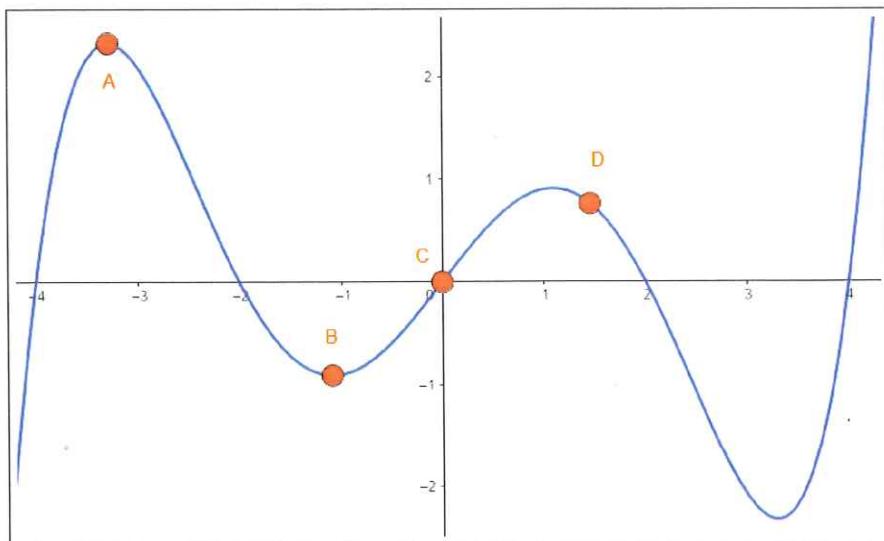
$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(0) = 90e^{3(0)} - 6(0) \quad f''(t) = 90e^{3t} - 6t \quad m/s^2.$$

$$= 90(1) = 90$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: **Alicia Caley**Perm Number: **0000030-2**TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7 **Quiz 9**

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

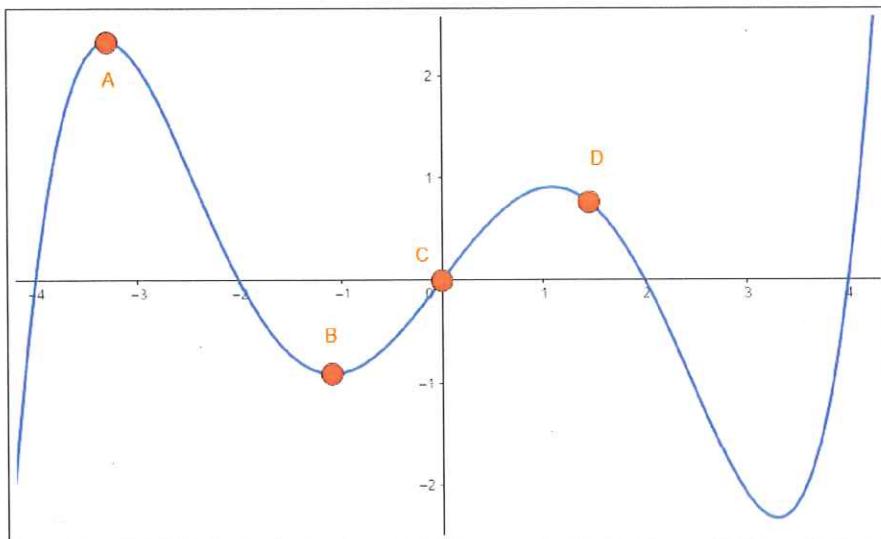
90 is the **acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

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**A**

$g''(x) < 0$

C

$g''(x) = 0$

B

$g''(x) > 0$

Name: Brandy Rodriguez

Perm Number:

6565634

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$e^{kn} = ne^{kn}$$

position
1st velocity
2nd acceleration
3rd jerk

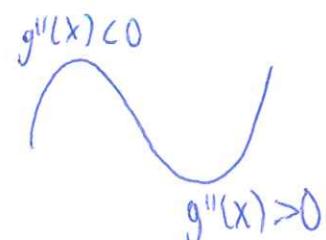
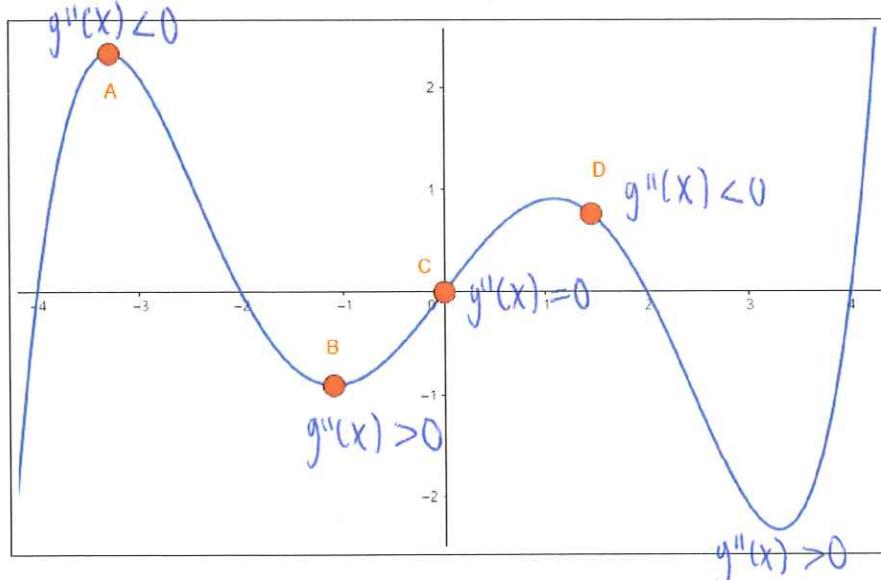
$$f(t) = 10e^{3t} - t^3$$

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 A
 $g''(x) < 0$
 C
 $g''(x) = 0$
 B
 $g''(x) > 0$

Name: **Alvaro Marquez**

Perm Number:

659 6506TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the **acceleration** of the particle at $t = 0$ seconds.*distance = 2nd of acceleration*

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

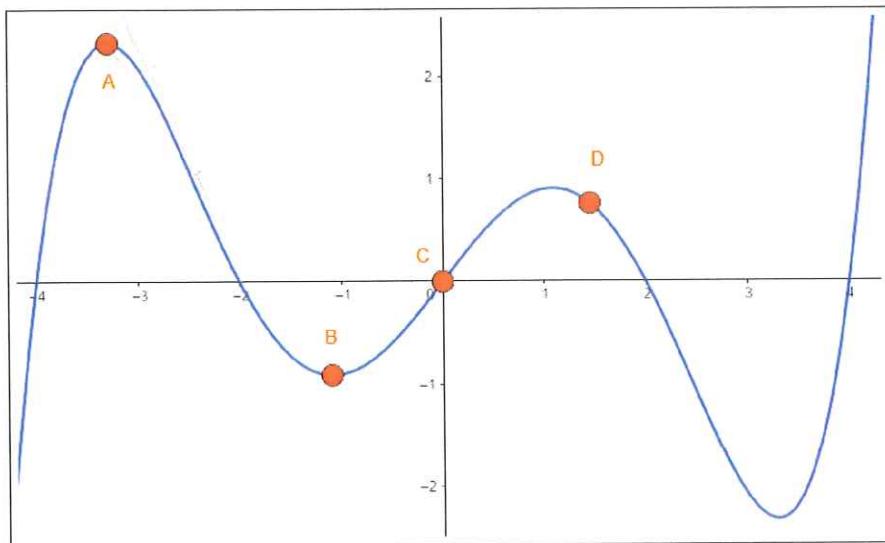
$$f(t) = 10e^{3t} - t^3$$

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A
 $g''(x) < 0$

C
 $g''(x) = 0$

D
 $g''(x) > 0$

Name: Yuxuan (Sophia) PanPerm Number: 646347TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

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90 is the acceleration. of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

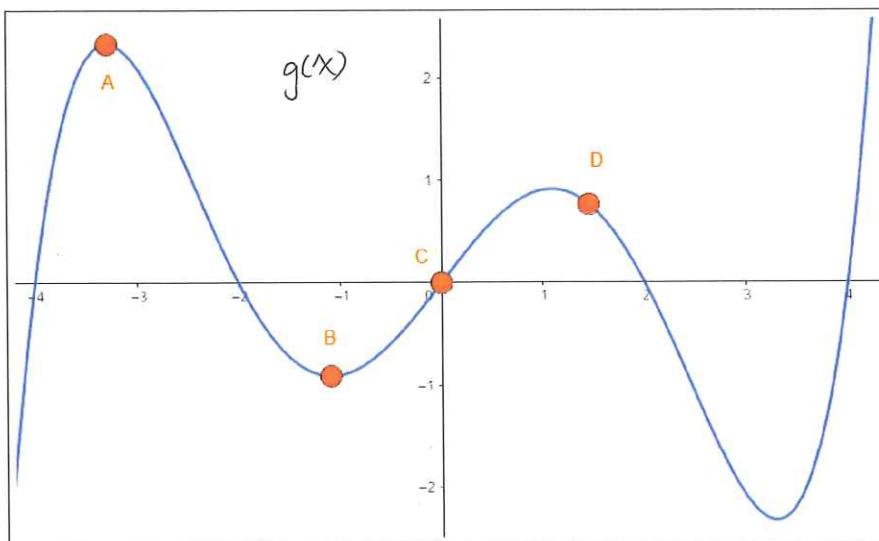
$$f(t) = 10e^{3t} - t^3$$

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B
 $g''(x) < 0$

C.
 $g''(x) = 0$

A.D
 $g''(x) > 0$

Name: Zoey Jasmine Moody

Perm Number: 4804134

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

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90 is the acceleration of the particle at $t = 0$ seconds.

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$$10e^{3t} - t^3$$

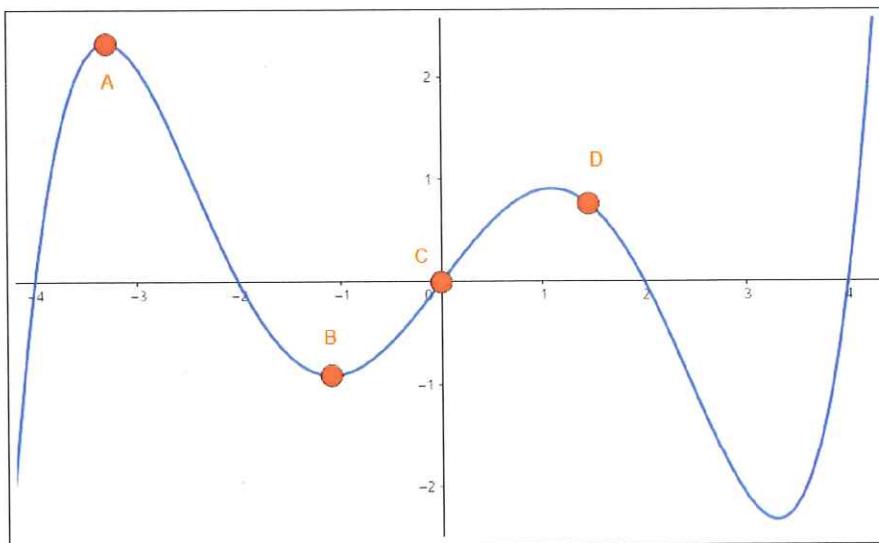
$$30e^{3t} - 3t^2$$

$$\boxed{90e^{3t} - 6t}$$

$$90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - \cancel{6t^3}} \text{ m/s}^2.$$

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D
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name:	<u>Colin Gallivan</u>	Perm Number:	<u>5862735</u>
TA:	Trevor <input checked="" type="checkbox"/>	Daniel <input type="checkbox"/>	Jeremy <input type="checkbox"/>
Day:	T <input checked="" type="checkbox"/>	R <input type="checkbox"/>	Time: 8 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input checked="" type="checkbox"/> 7 <input type="checkbox"/>

Quiz 9

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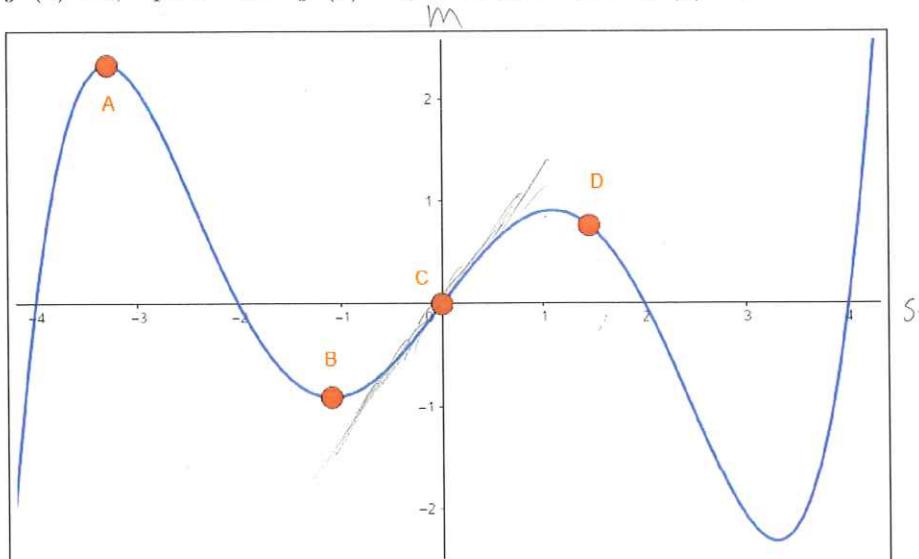
90 is the acceleration of the particle at $t = 0$ seconds.

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B

$g''(x) < 0$

C

$g''(x) = 0$

A

$g''(x) > 0$

Name: Erick Castillo

Perm Number: 5900857

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the Acceleration of the particle at $t = 0$ seconds.

$f(t)$ Speed
 $f'(t)$ Height
 $f''(t)$ Acceleration
 $g(t)$ Velocity

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

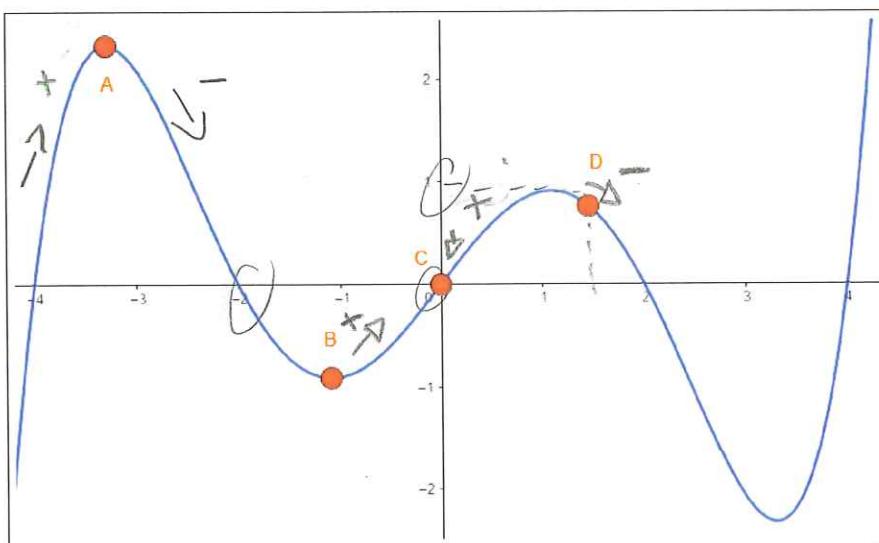
$$f'' \quad f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

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X Less than 0

 -2 $g''(x) < 0$ 0 $g''(x) = 0$ 1 $g''(x) > 0$

Name: Jessica AmezuaPerm Number: 5714381TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

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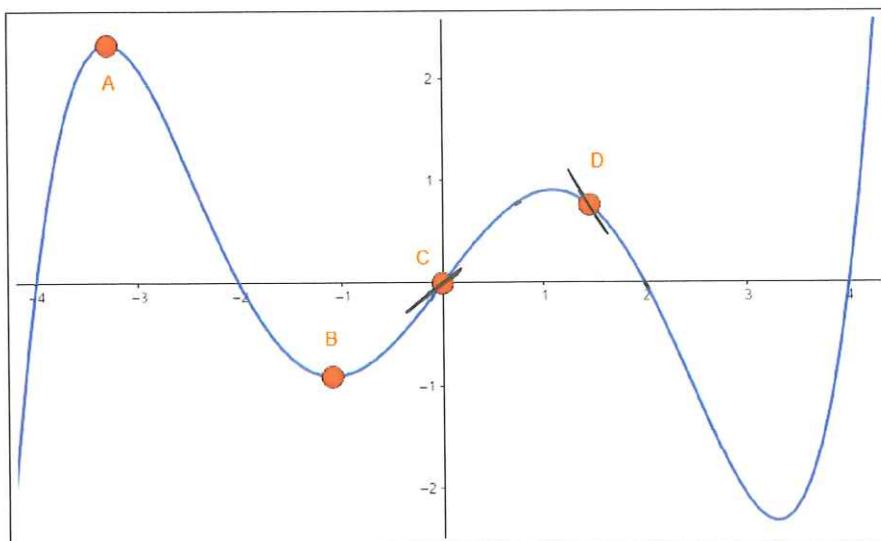
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$$f'(t) = 30e^{3t} - 3t^2$$

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D

$$g''(x) < 0$$

A, B

$$g''(x) = 0$$

C

$$g''(x) > 0$$

Name: **Odalys Ordaz**

Perm Number:

6065536TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

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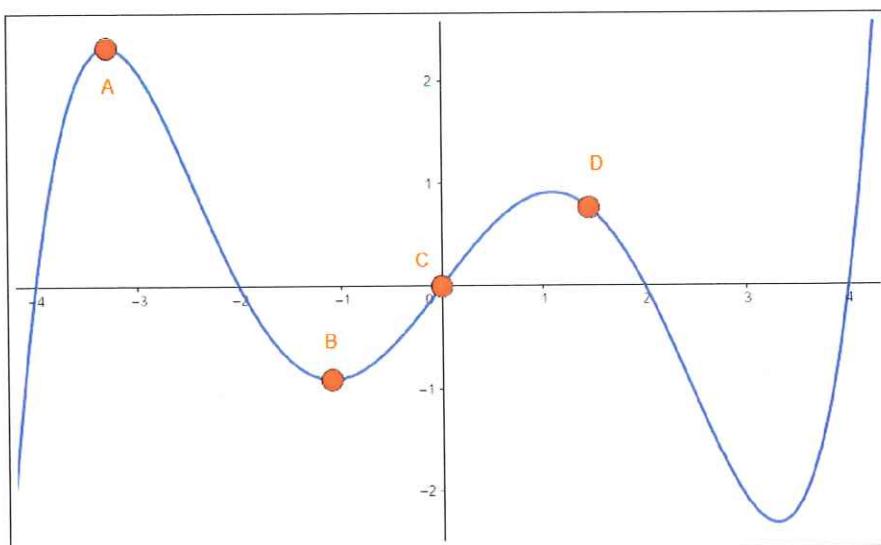
90 is the **acceleration** of the particle at $t = 0$ seconds.

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 $g''(x) < 0$

A
 $g''(x) = 0$

C
 $g''(x) > 0$

Name: **Samantha Stevens**Perm Number: **5113980**TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7 **Quiz 9**

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

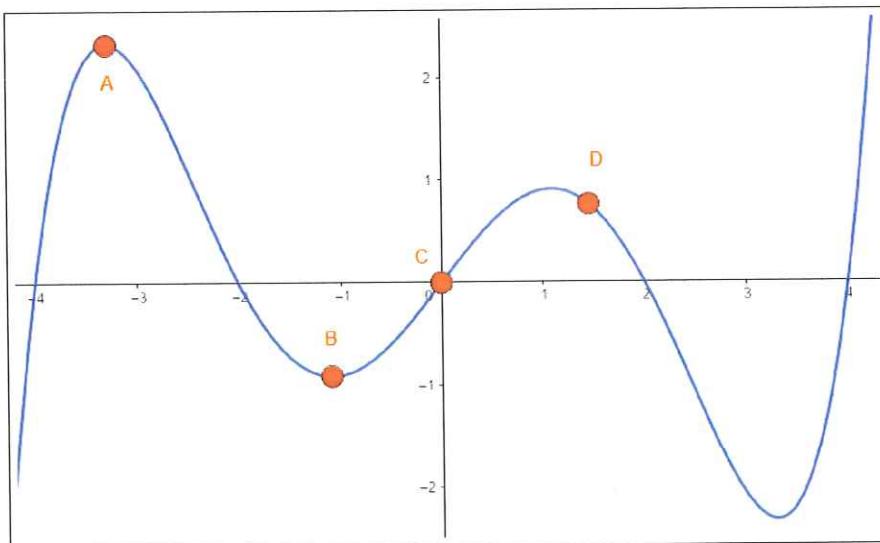
90 is the **acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} & 10e^{3t} - t^3 \\ & 3 \cdot 10e^{3t} - 3t^2 \\ & 30e^{3t} - 3t^2 \\ & 90e^{3t} - 6t \end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



B

$$g''(x) < 0$$

lesser

C

$$g''(x) = 0$$

equal

D

$$g''(x) > 0$$

greater

Name: Vivian de waart

Perm Number:

5171530

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 10(e^{3t} \cdot 3) - 3t^2$$

$$30e^{3t} - 3t^2$$

$$f''(t) = 30(e^{3t} \cdot 3) - 6t$$

$$f''(t) = 90e^{3t} - 6t$$

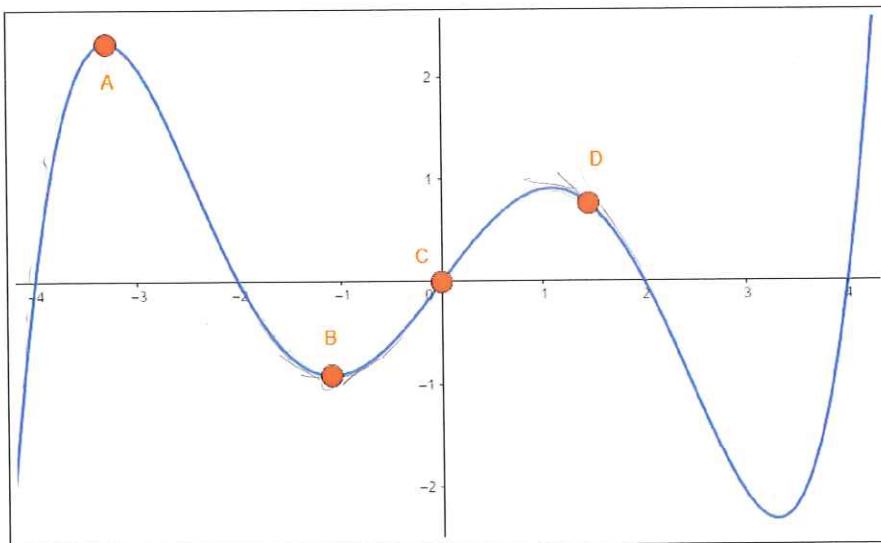
$$f''(0) = 90e^{3(0)} - 6(0)$$

$$90(1) - 0 \quad \checkmark$$

$$f''(0) = 90$$

$$f''(t) = \boxed{90e^{3t} - 6} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: **Ray Hernandez**

Perm Number:

5714902TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the **acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

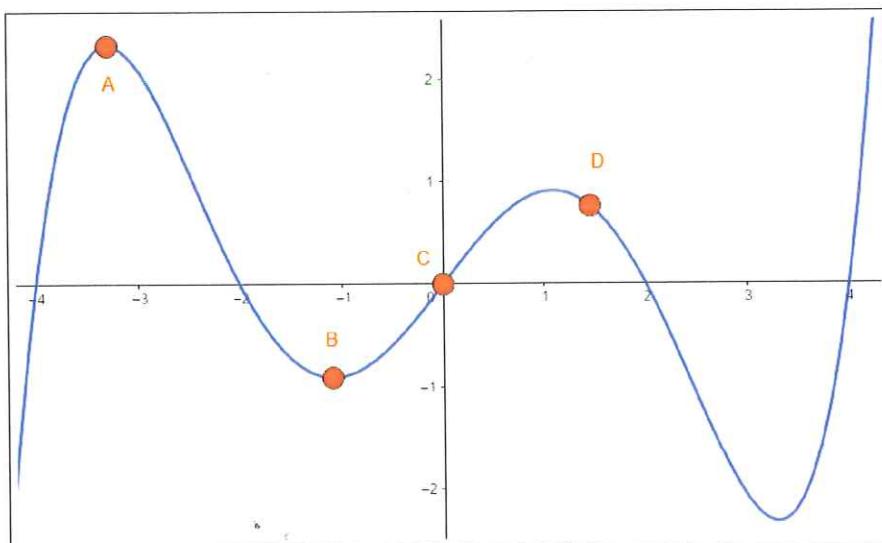
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30te^{3t} - 3t^2$$

$$f''(t) = 90te^{3t} - 6t$$

$$f''(t) = 90te^{3t} - 6t \quad m/s^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: **Heidi Spanke**

Perm Number:

5958525TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

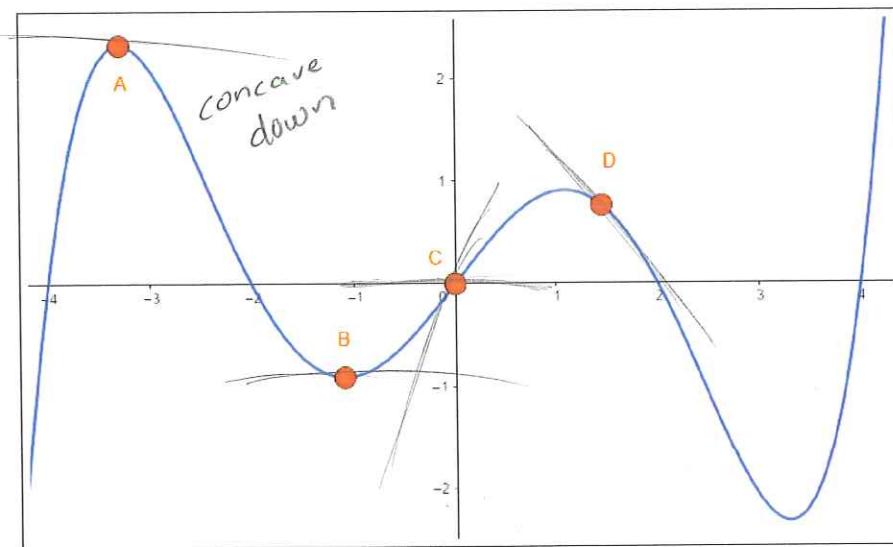
90 is the **acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned}f(t) &= 10e^{3t} - t^3 \\f'(t) &= 30e^{3t} - 3t^2 \\f''(t) &= 90e^{3t} - 6t\end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$$\boxed{B} \quad g''(x) < 0$$

$$\boxed{C} \quad g''(x) = 0$$

$$\boxed{A} \quad g''(x) > 0$$

Name: Natasha Gavriloff

Perm Number:

6773113

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

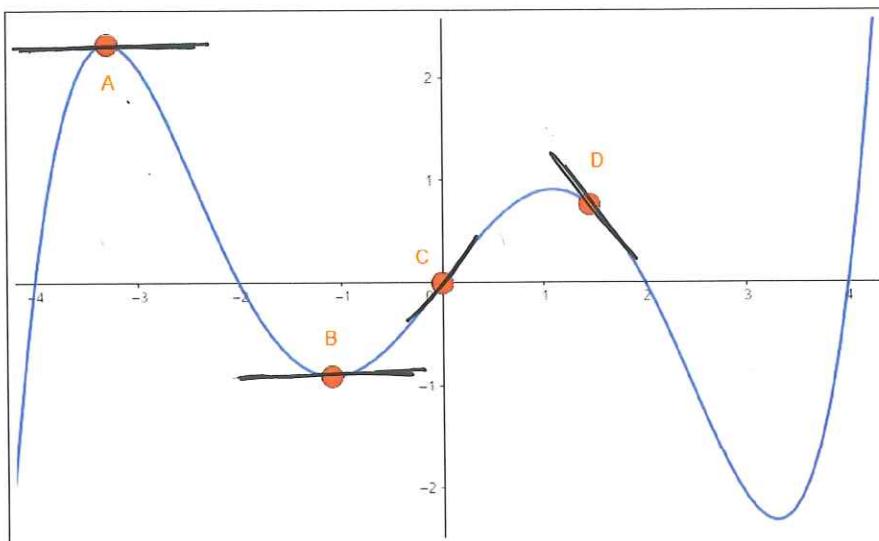
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D

$$g''(x) < 0$$

B

$$g''(x) = 0$$

C

$$g''(x) > 0$$

Name:

Rebecca Kabel

Perm Number:

568 4769

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the

acceleration

of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f(t) = 10e^{3t} - t^3$$

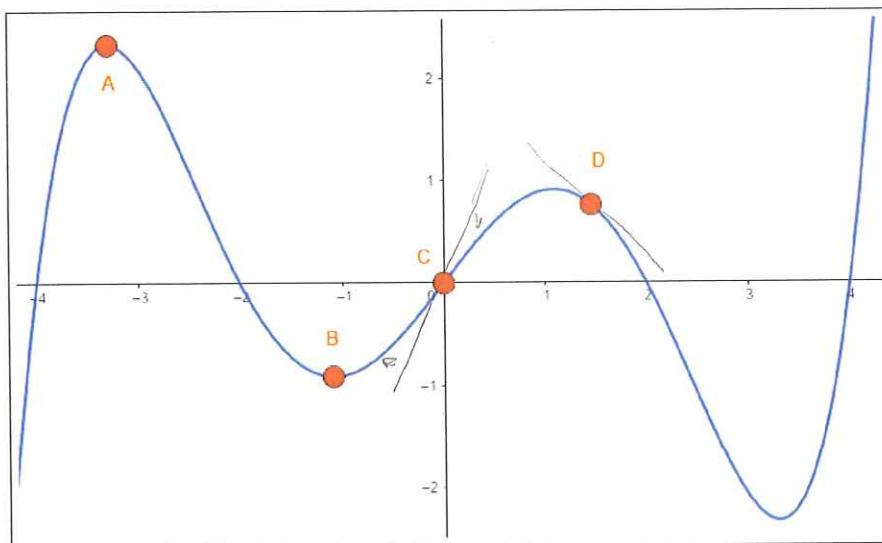
$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$\begin{array}{r} 30 \\ \times 3 \\ \hline 90 \end{array}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: **Kellie Beckett**

Perm Number:

479460-5TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

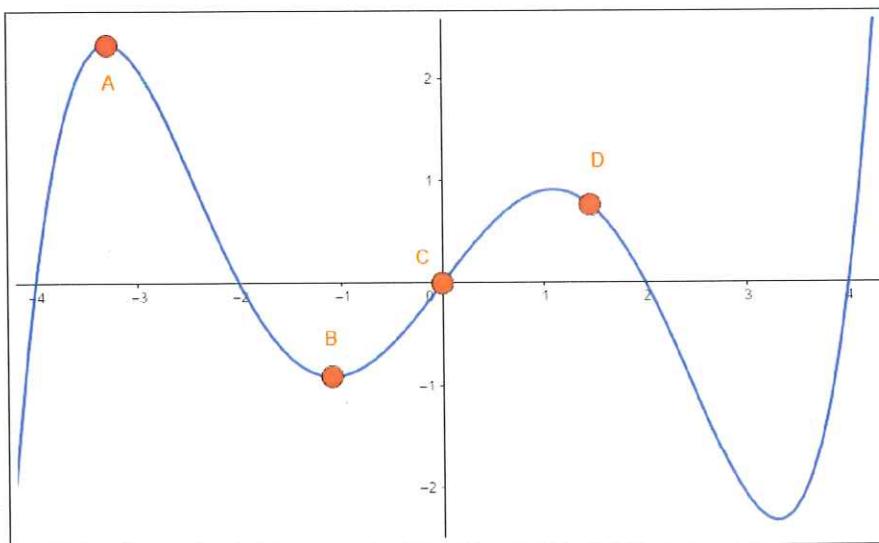
90 is the **acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.

**D**

$$g''(x) < 0$$

A

$$g''(x) = 0$$

C

$$g''(x) > 0$$

Name: Max Levin

Perm Number:

4984886

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the Acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

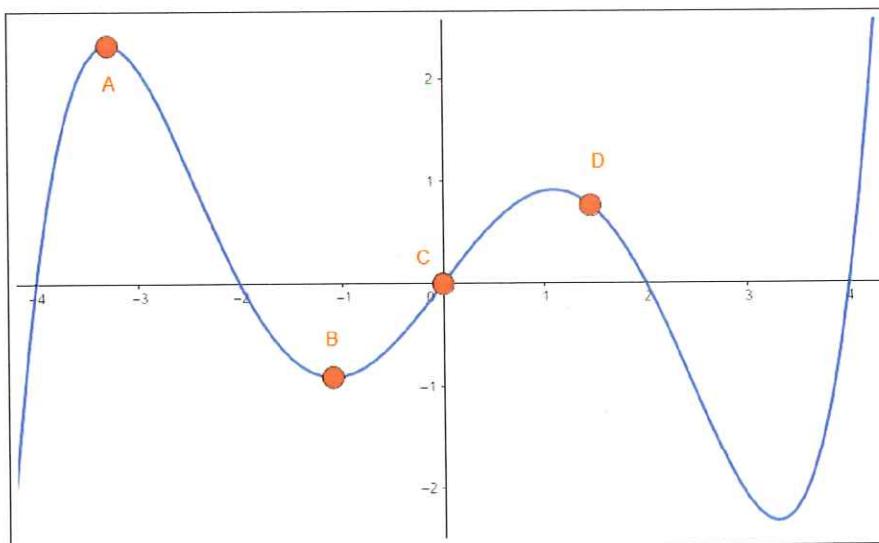
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = 90e^{3t} - 6t \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D
 $g''(x) < 0$

C
 $g''(x) = 0$

A
 $g''(x) > 0$

Name: Desiree Espinoza

Perm Number: 4736211

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

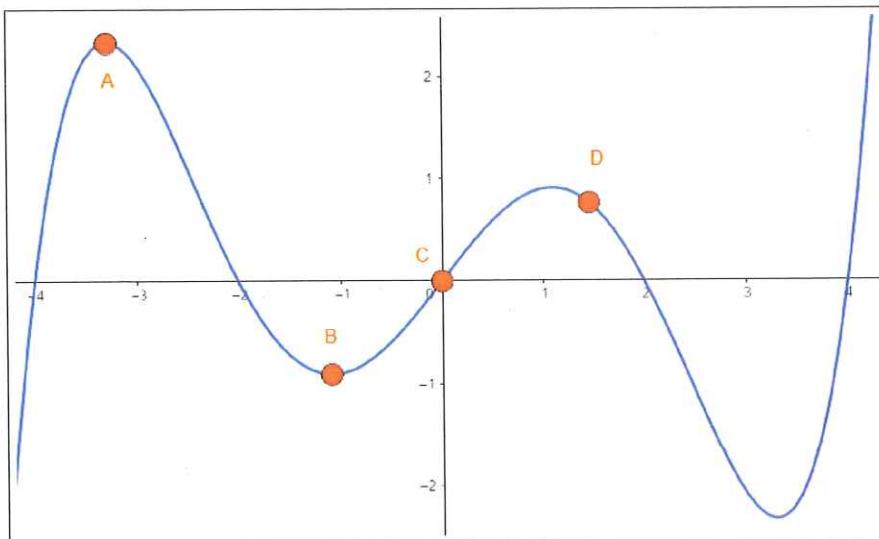
90 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f''(0) = 90$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$$\begin{aligned} g''(x) &< 0 \\ g''(x) &= 0 \\ g''(x) &> 0 \end{aligned}$$

D
 $g''(x) < 0$

C
 $g''(x) = 0$

A
 $g''(x) > 0$

Name: Riley Clark

Perm Number: 5155312

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$. m/s^2

90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

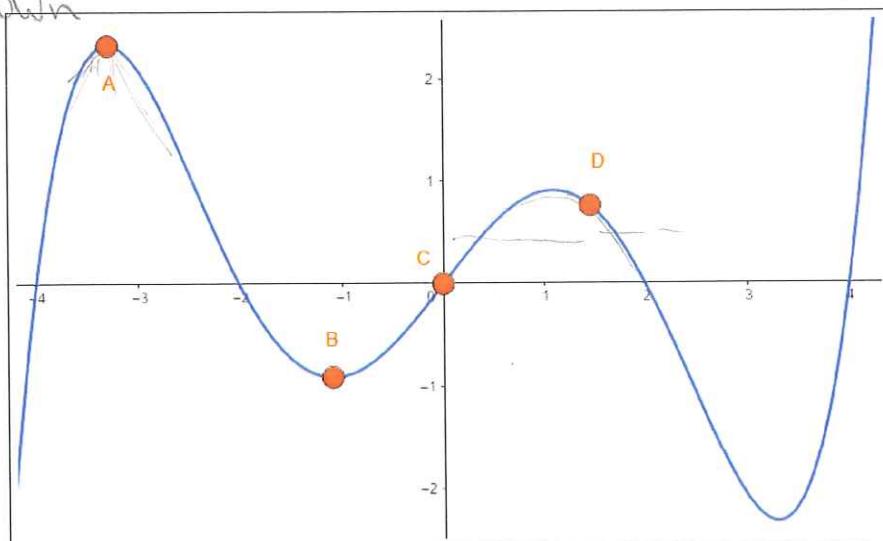
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 30e^{3t} - 6t$$

$$f''(t) = \boxed{30e^{3t} - 6t} m/s^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$; a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A

$$g''(x) < 0$$

B

$$g''(x) = 0$$

D

$$g''(x) > 0$$

Name: **Hanpen Giordano**

Perm Number:

5884150TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the **acceleration** of the particle at $t = 0$ seconds.

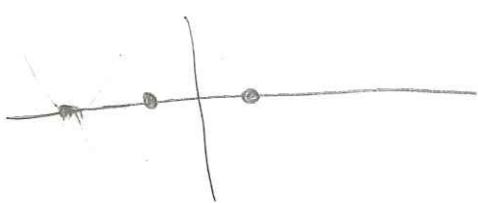
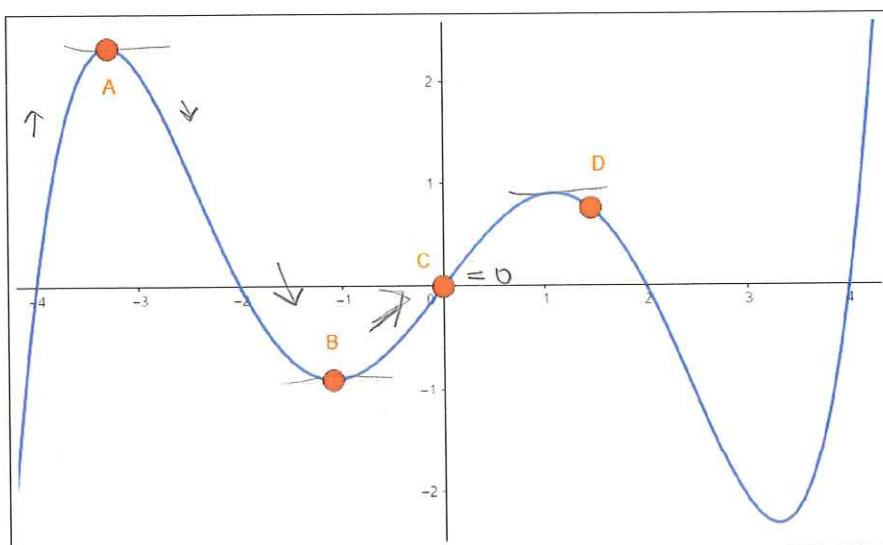
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $\underline{g''(x) = 0}$, and a point where $\overline{g''(x) > 0}$.



A
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: Ian Huang

Perm Number:

3926409

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the of the particle at $t = 0$ seconds.

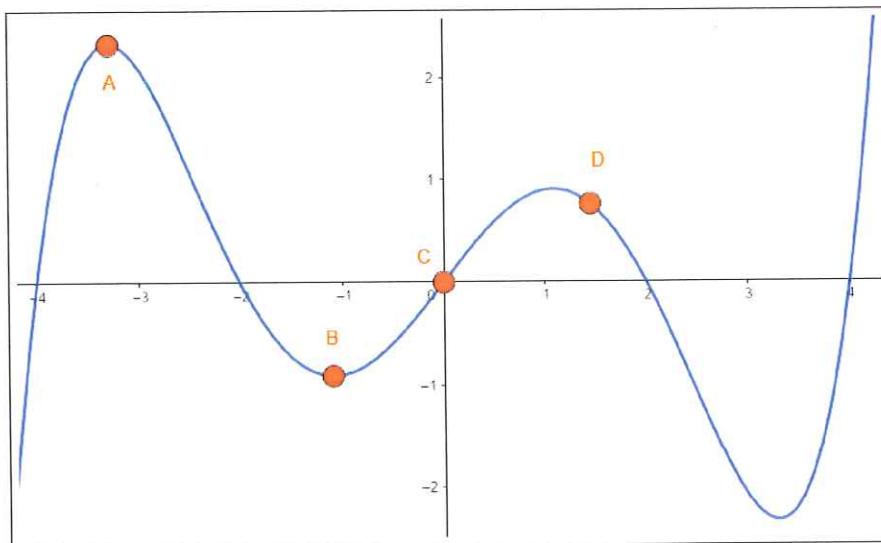
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 10 \cdot 3e^{3t} - 3t^2 = 30e^{3t} - 3t^2$$

$$f''(t) = 30 \cdot 3e^{3t} - 3 \cdot 2t = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: Christopher Boling

Perm Number:

6065534

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

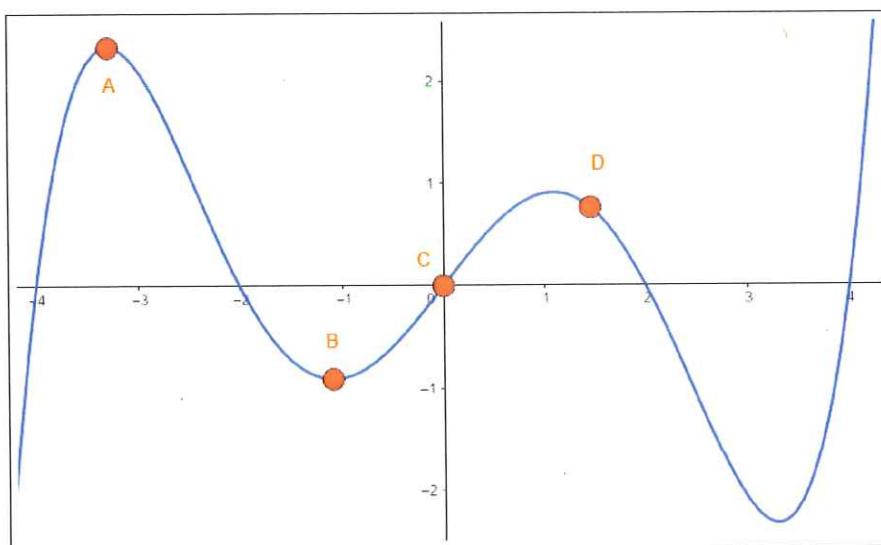
90 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} & 10e^{3t} - t^3 \\ & 30te^{3t-1} - 3t^2 \\ & 90t^2 - 30t e^{3t-2} - 6t \end{aligned}$$

$$f''(t) = \boxed{90t^2 - 30t e^{3t-2} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



B

$$g''(x) < 0$$

C

$$g''(x) = 0$$

D

$$g''(x) > 0$$

Name: Elika Zavedi

Perm Number:

3947280

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

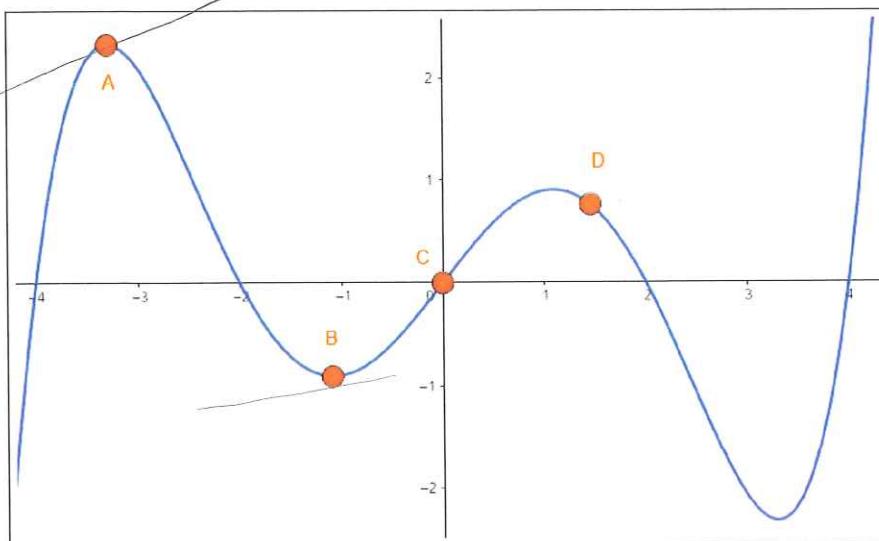
90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} f(t) &= 10e^{3t} - t^3 \\ f'(t) &= 30e^{3t} - 3t^2 \\ f''(t) &= 90e^{3t} - 9t^2 \end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 9t^2} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: Mason MontgomeryPerm Number: 392956TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

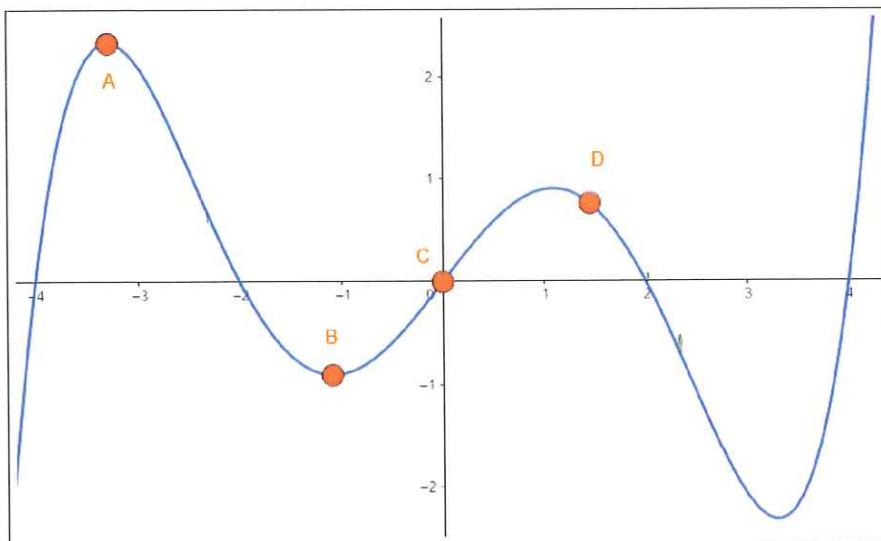
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

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A

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: Anyi ZhaoPerm Number: X307060TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

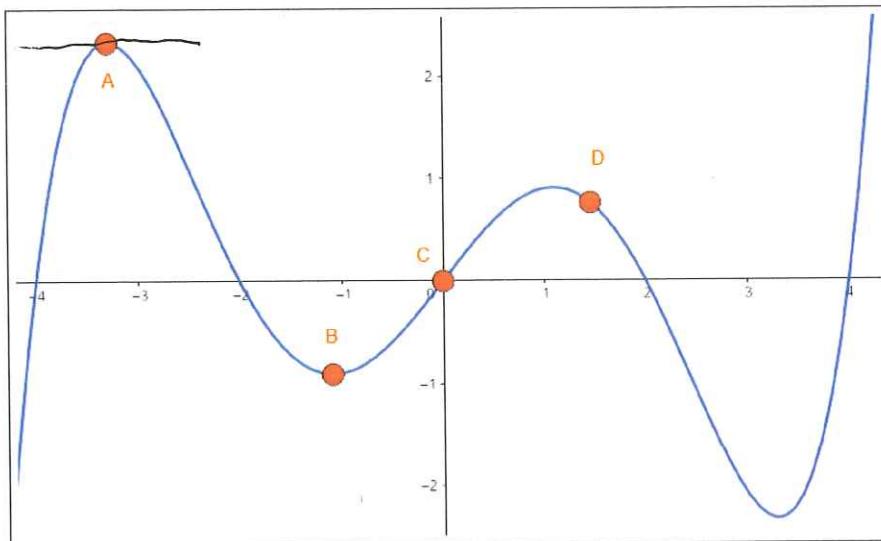
90 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} f(t) &= 10 \cdot 3t e^{3t} - 3t^2 \\ &= 30t e^{3t} - 3t^2 \\ f''(t) &= 30t \cdot 3t \cdot e^{3t} - 3 \cdot 2t \\ &= 90t^2 \cdot e^{3t} - 6t \end{aligned}$$

$$f''(t) = \boxed{90t^2 \cdot e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.

D

$$g''(x) < 0$$

A, B

$$g''(x) = 0$$

C

$$g''(x) > 0$$

Name: **Candice Moreno** Perm Number: **8930448**

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the **acceleration** of the particle at $t = 0$ seconds.

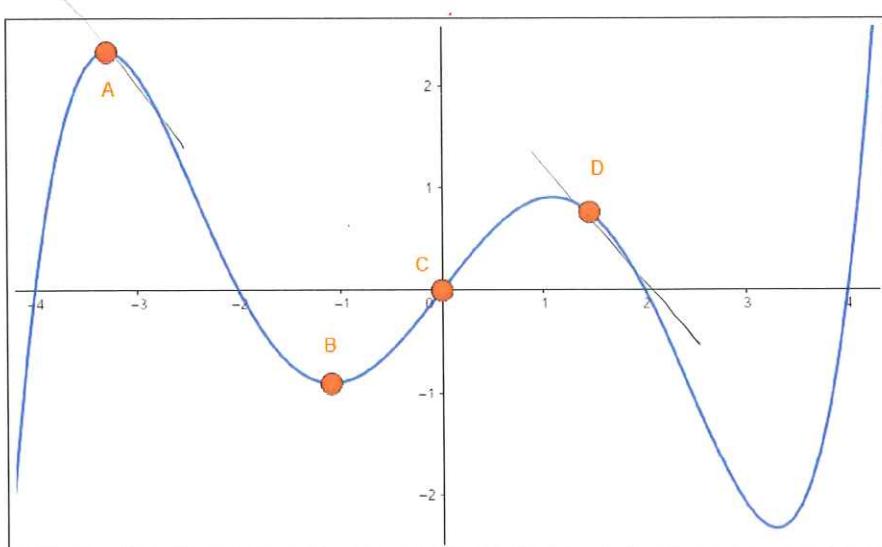
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



B
 $g''(x) < 0$

A
 $g''(x) = 0$

D
 $g''(x) > 0$

Name: **Joelle Haddad** Perm Number: **4700282**

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

HS A Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

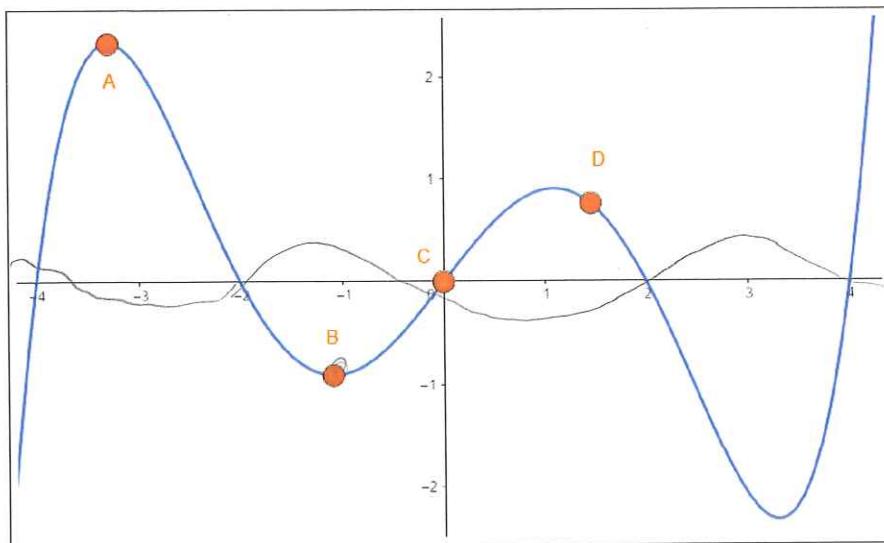
90 is the **acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} & 10e^{3t} - t^3 \\ & 30e^{3t} - 3t^2 \\ & 90e^{3t} - 6t \end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



B
 $g''(x) < 0$

C
 $g''(x) = 0$

A
 $g''(x) > 0$

Name: Aiden Afresia

Perm Number:

S229869

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the of the particle at $t = 0$ seconds.

velocity
↓
acceleration

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

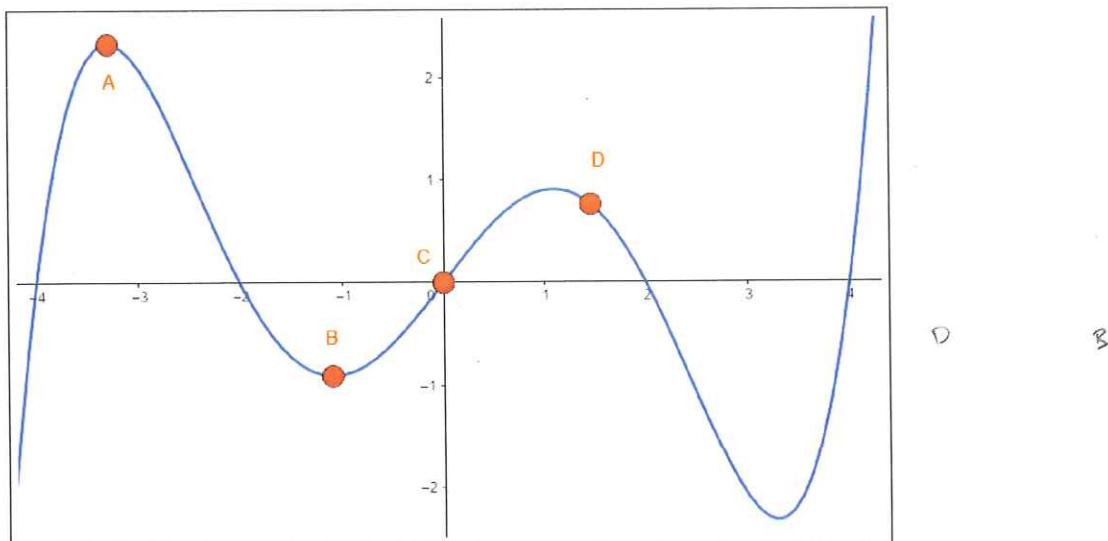
$$10e^{3t} - t^3$$

$$f' \quad 30e^{3t} - 3t^2$$

$$f'' \quad 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \quad m/s^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: **Zoe Albornoz**Perm Number: **6497796**TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7 **Quiz 9**

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the **acceleration** of the particle at $t = 0$ seconds.

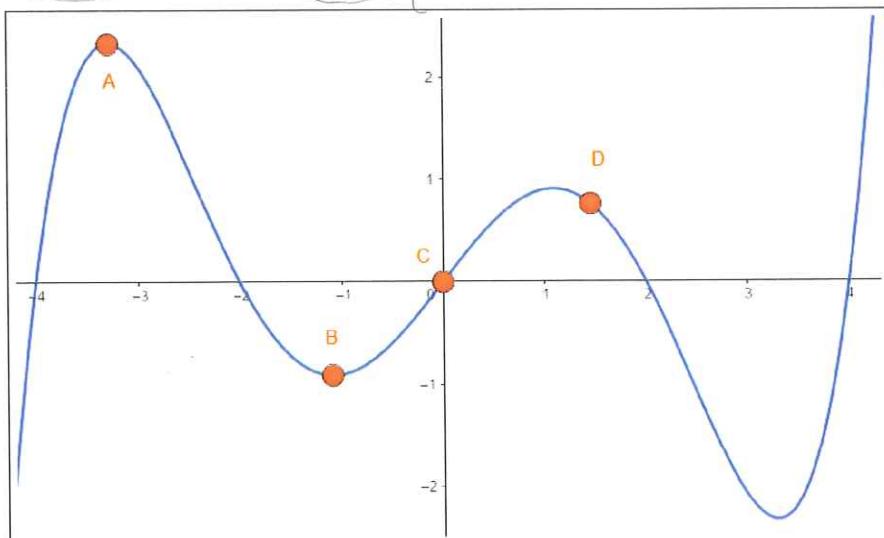
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify **a point where $g''(x) < 0$** , **a point where $g''(x) = 0$** , and **a point where $g''(x) > 0$** .



 $g''(x) < 0$

 $g''(x) = 0$

 $g''(x) > 0$

Name: Jessica Taghizadeh

Perm Number:

6681472

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds. or velocity

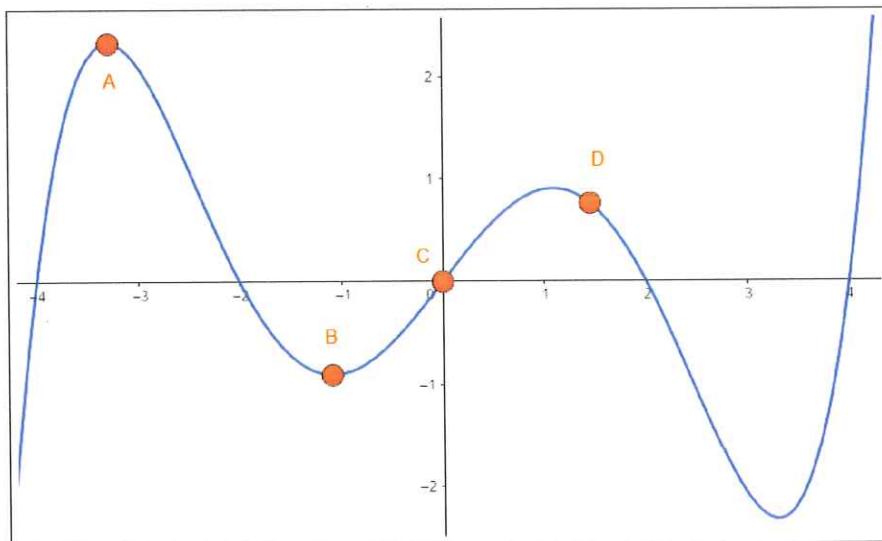
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned}f(t) &= 10e^{3t} - t^3 \\f'(t) &= 30e^{3t} - 3t^2 \\f''(t) &= 90e^{3t} - 6t\end{aligned}$$

$\frac{m}{s}$ = speed

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



B
 $g''(x) < 0$

C
 $g''(x) = 0$

D
 $g''(x) > 0$

Name: Ela SchulzPerm Number: 5895183TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the acceleration of the particle at $t = 0$ seconds.

velocity \rightarrow acceleration

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

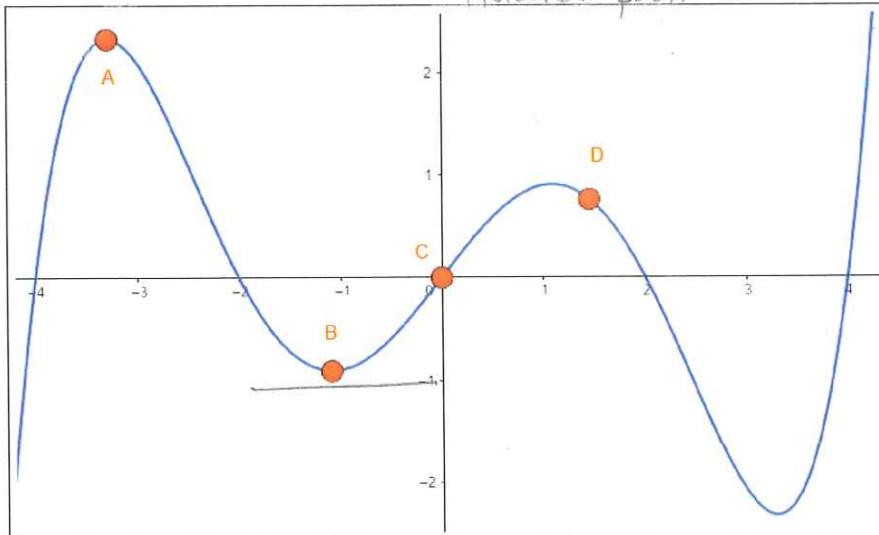
$$f''(t) = 90e^{3t} - 6t \checkmark$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.

inflection point

concave up



concave down

D

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: CONNELL TRAINOR

Perm Number:

6872899

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

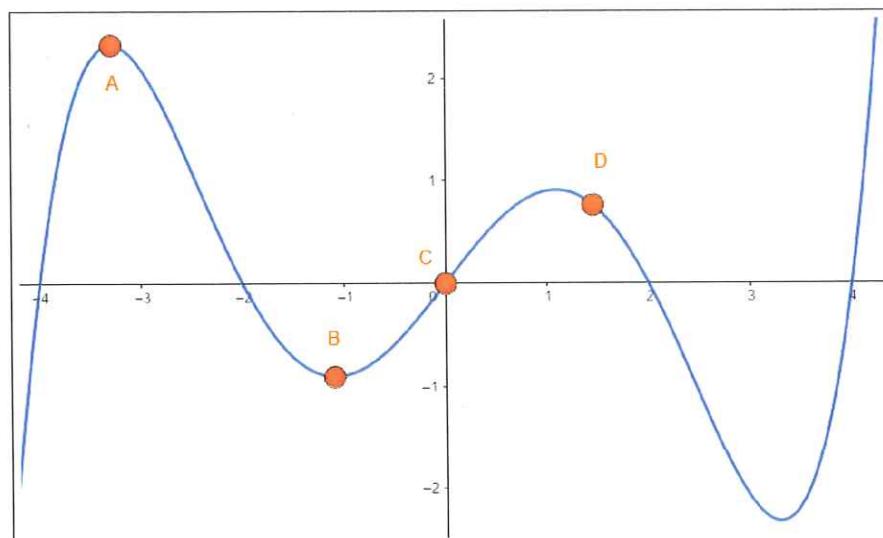
$$f(t) = 10e^{3t} - t^3$$

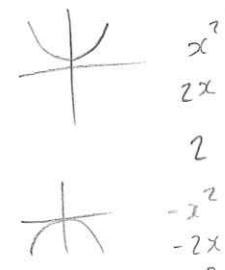
$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$$g''(x) < 0 \rightarrow \text{decelerating}$$


 a
 $g''(x) < 0$

 c
 $g''(x) = 0$

 b
 $g''(x) > 0$

Name: Yang Li

Perm Number:

3996188

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

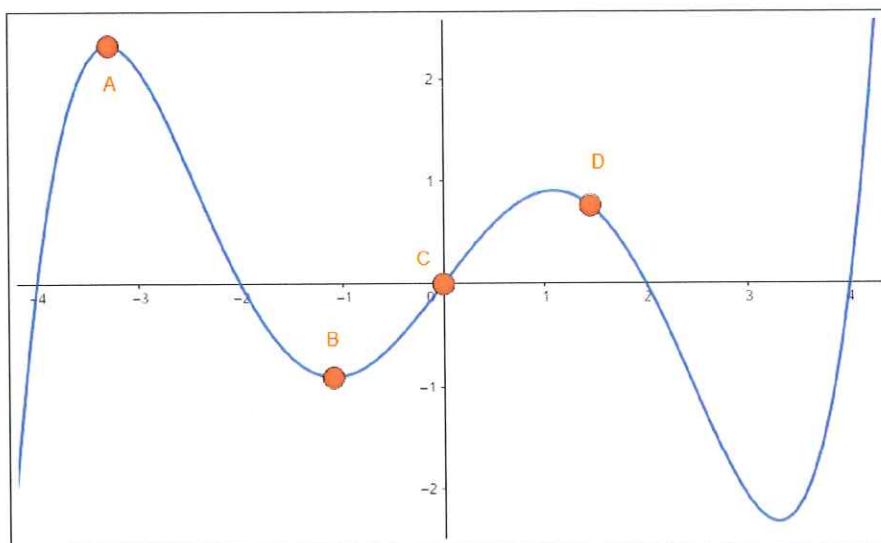
90 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} & 30e^{3t} \\ & 3t^2 \\ & 6t \end{aligned}$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



 $g''(x) < 0$

 $g''(x) = 0$

 $g''(x) > 0$

Name: Marc Wumez

Perm Number:

8042103TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the concavity of the particle at $t = 0$ seconds.

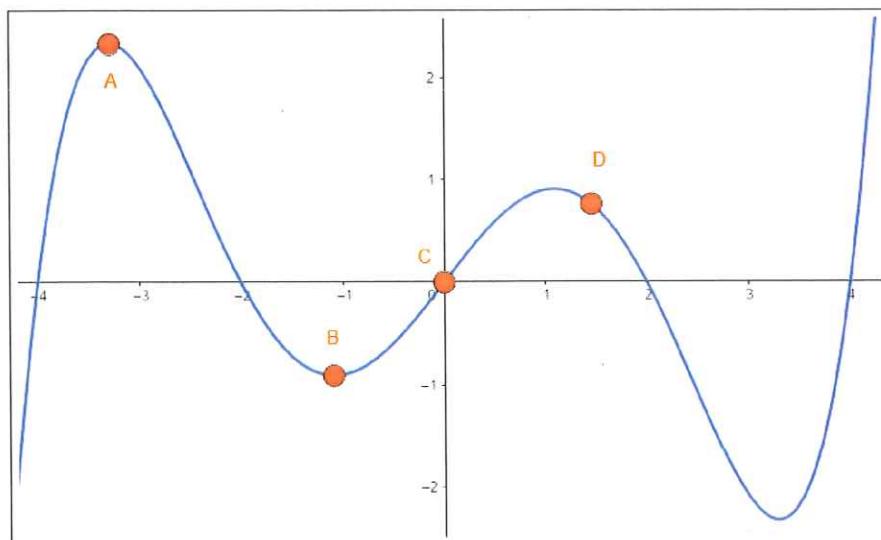
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: Taylor Tidmarsh

Perm Number: 5709415

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = 90$.

90 is the

Velocity

of the particle at $t = 0$ seconds.

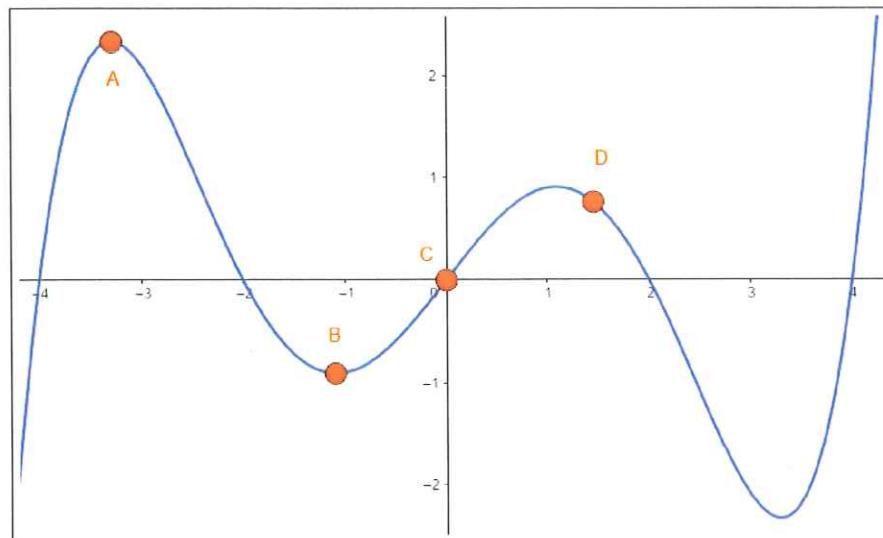
$$f(x) = 30e^{3x} - 3x^2$$

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$90e^{3t} - 6t$$

$$f''(t) = \boxed{} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$$\boxed{D}$$

$g''(x) < 0$

$$\boxed{A, B}$$

$g''(x) = 0$

$$\boxed{C}$$

$g''(x) > 0$

Name: Mustapha Saeed

Perm Number: 4744215

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

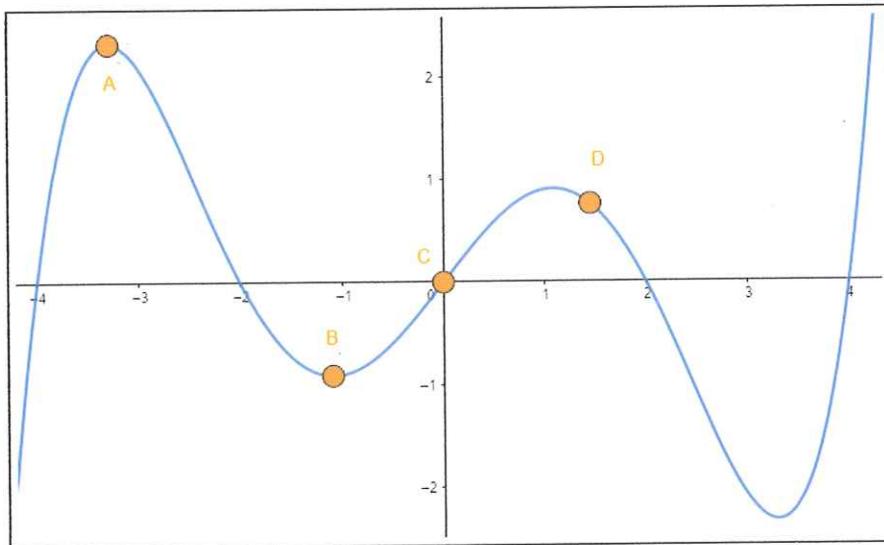
$$f'(t) = 10(3t \cdot e^{3t}) - 3t^2$$

$$f'(t) = 30te^{3t} - 3t^2$$

$$\begin{aligned} f''(t) &= 30t(3t \cdot e^{3t}) - 6t \\ &= 90t^2 e^{3t} - 6t \end{aligned}$$

$$f''(t) = 90t^2 e^{3t} - 6t \quad \underline{\underline{m/s^2}}$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$$D$$

$$g''(x) < 0$$

$$A$$

$$g''(x) = 0$$

$$C$$

$$g''(x) > 0$$

Name: **Iliana De La Riva**

Perm Number:

6591473TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

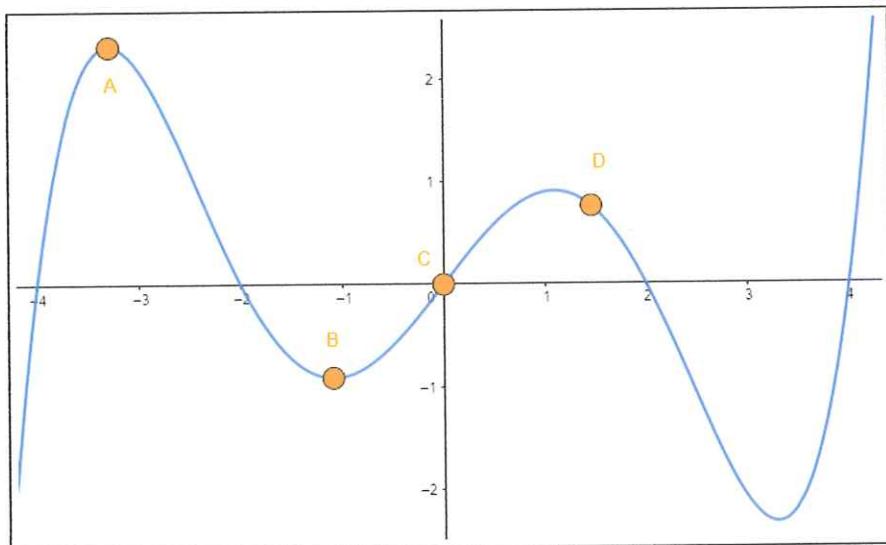
-6 is the **maximum** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} f(t) &= 10e^{3t} - t^3 \\ &= 10e^{3t} - t^3 \\ &= \frac{3}{3}e^{3t} - t^3 \\ &= + - t^3 \end{aligned}$$

$$f''(t) = -t^3 + + m/s^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A
 $g''(x) < 0$

B
 $g''(x) = 0$

D
 $g''(x) > 0$

Name: Isabella Agrusa

Perm Number:

3962537

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the Velocity of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

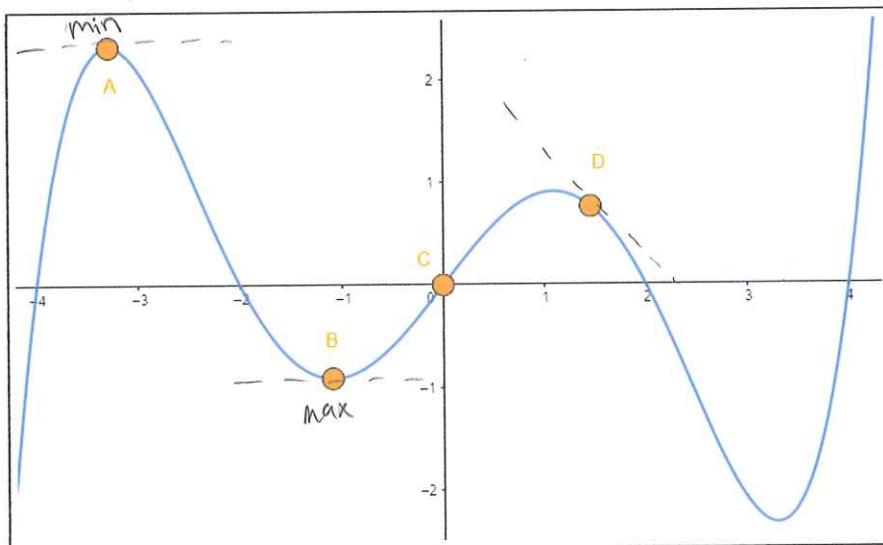
$$f'(t) = 10e^{3t} - t^3$$

$$f''(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$g''(x) < 0$ less than 0
 $g''(x) = 0$
 $g''(x) > 0$ more than 0

A
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: Victoria McNabb

Perm Number: 5171038

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $\underline{f''(0) = -6}$.

-6 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 10 \cdot 3e^{3t} - 3t^2$$

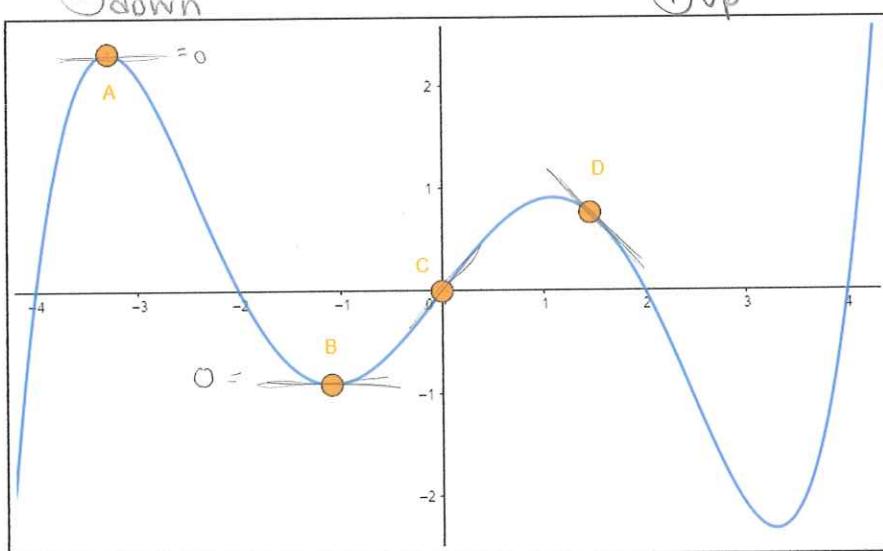
$$30e^{3t} - 3t^2$$

$$f''(t) = 30 \cdot 3e^{3t} - 6t$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



 $g''(x) < 0$

 $g''(x) = 0$

 $g''(x) > 0$

Name: Noelle Magana

Perm Number:

6215446

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

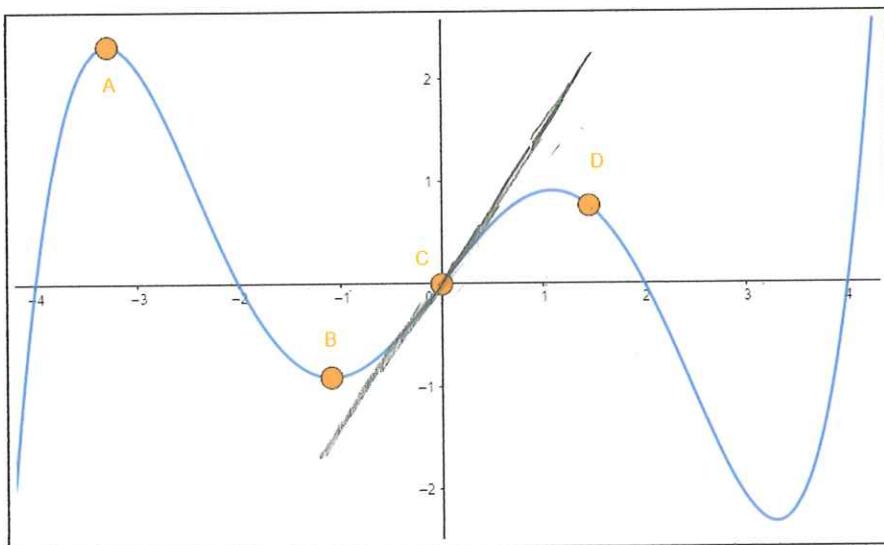
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \quad m/s^2$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$$(-3, 2)$$

$g''(x) < 0$

$$(0, 0)$$

$g''(x) = 0$

$$(1.5, 1)$$

$g''(x) > 0$

Name: Fleurette Jada

Perm Number:

5279351

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the **acceleration** of the particle at $t = 0$ seconds.

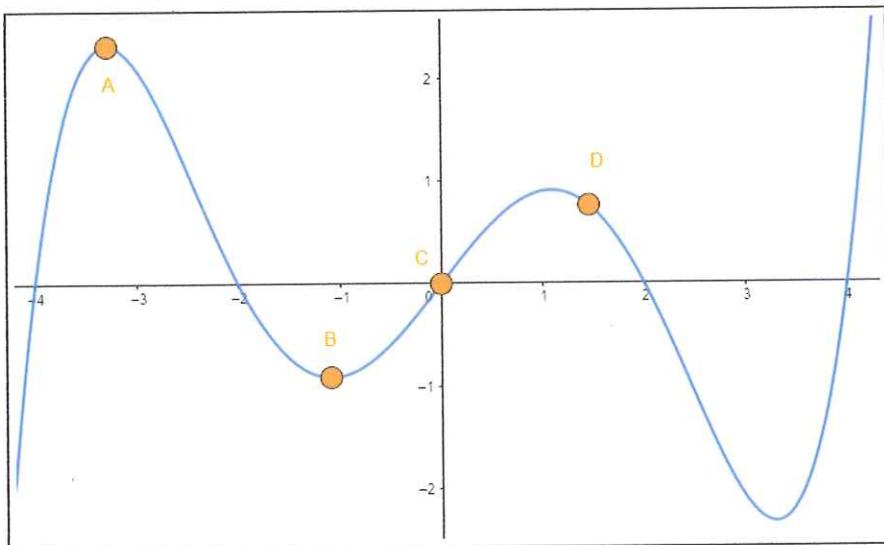
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = 90e^{3t} - 6t \quad m/s^2$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



D

$$g''(x) < 0$$

B

$$g''(x) = 0$$

C

$$g''(x) > 0$$

Name: **LUCIA CARCAMO**Perm Number: **6185995**TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7 **Quiz 9**

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the **ACCELERATION** of the particle at $t = 0$ seconds.

$$f'(RKX) = Ke^{KX}$$

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 10(3)e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 10(3)e^{3t} - 3t^2$$

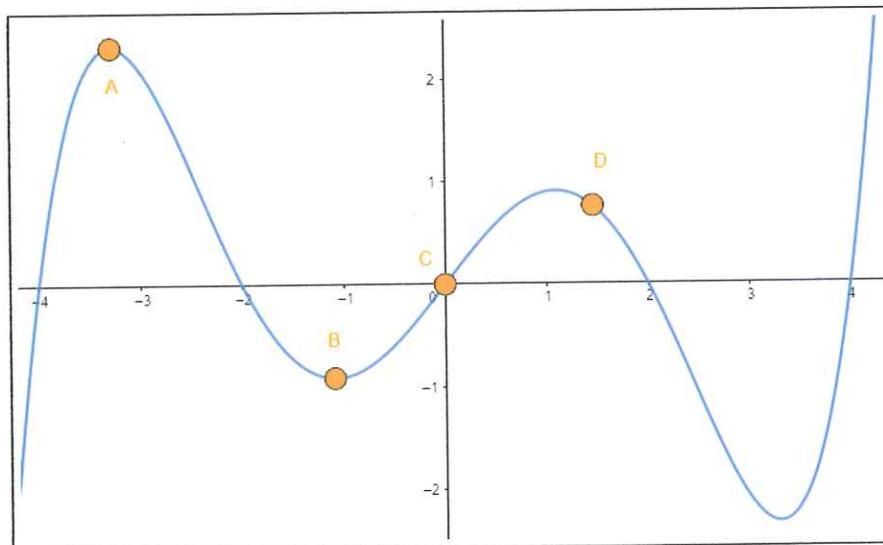
$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 30(3)e^{3t} - 6t$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



$g''(x) < 0$
=concave ↑

 $g''(x) < 0$

 $g''(x) = 0$

 $g''(x) > 0$

Name:

Leo Sufir

Perm Number:

5194121

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the **acceleration** of the particle at $t = 0$ seconds.

$$(n-1)n^x^{n-2}$$

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

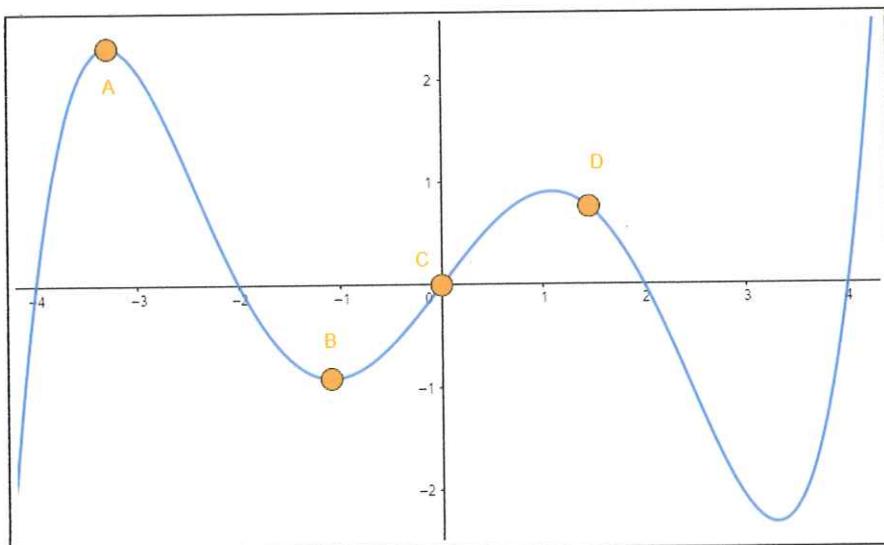
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{2t} - 3t$$

$$f''(t) = 60e^t - 3$$

$$f''(t) = 60e^t - 3 \text{ m/s}^2$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name:

Kyla Drengler Spin

Perm Number:

8696767

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the **acceleration** of the particle at $t = 0$ seconds.

$$\begin{aligned} f' &= \text{velocity} \\ f'' &= \text{acc} \end{aligned}$$

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f(t) = 10e^{3t} - t^3$$

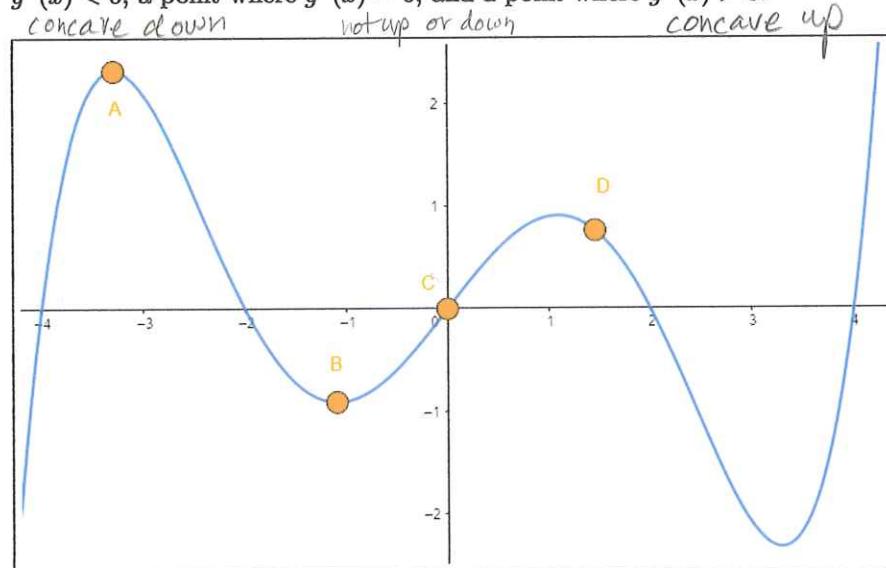
$$f'(t) = 30te^{3t} - 3t^2$$

$$f''(t) = 90t^2 e^{3t} - 6t$$

3b4

$$f''(t) = 90t^2 e^{3t} - 6t \quad \text{m/s}^2$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A
 $g''(x) < 0$

C
 $g''(x) = 0$

B
 $g''(x) > 0$

Name: Bryan Vinh

Perm Number: 5133277

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

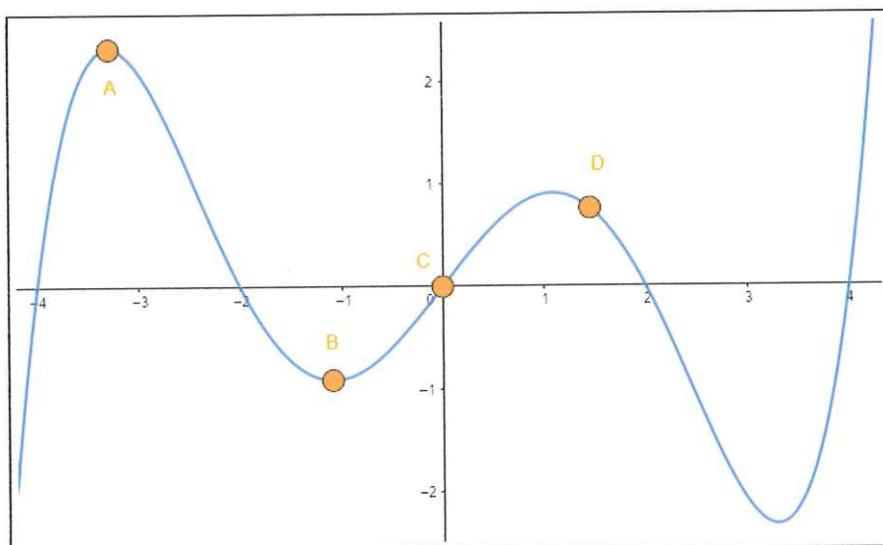
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



- | | | |
|--|--|--|
| A | C | B |
| $g''(x) < 0$ | $g''(x) = 0$ | $g''(x) > 0$ |

Name:

Kat Brydson

Perm Number:

5100805

TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7

Quiz 9

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the **acceleration** of the particle at $t = 0$ seconds.

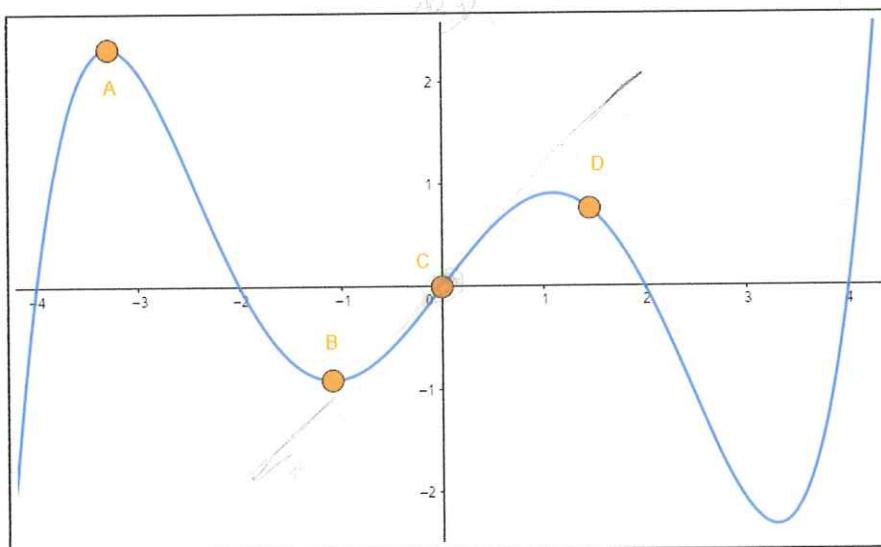
- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$f'(t) = 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = 90e^{3t} - 6t \quad m/s^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



A

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

Name: **Justin Jose**

Perm Number:

5345780TA: Trevor Daniel Jeremy Day: T R Time: 8 5 6 7 **Quiz 9**

- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the **Acceleration** of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

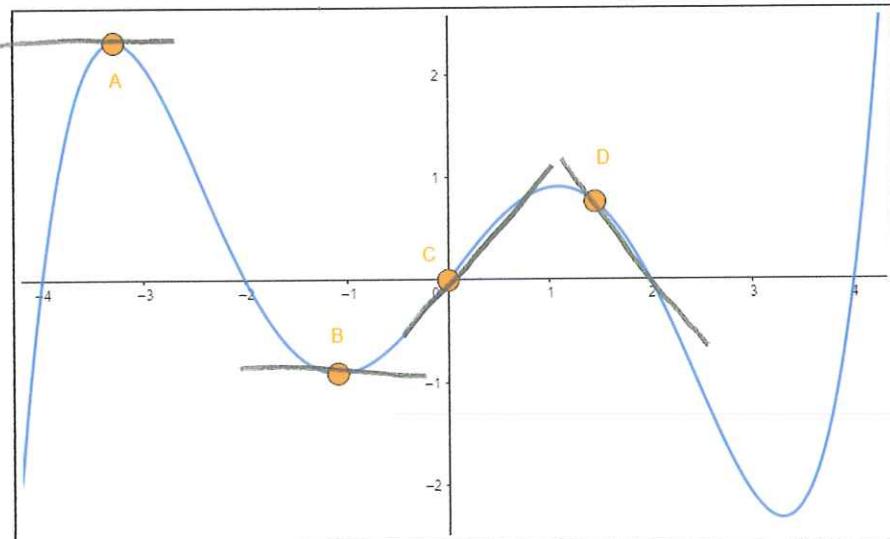
$$f(t) = 10e^{3t} - t^3$$

$$f'(t) \approx 30e^{3t} - 3t^2$$

$$f''(t) = 90e^{3t} - 6t$$

$$f''(t) = \boxed{90e^{3t} - 6t} \text{ m/s}^2.$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.

**(-)****D**
 $g''(x) < 0$ **(+)****A, B**
 $g''(x) = 0$ **C**
 $g''(x) > 0$

Name: Isabella Bishop

Perm Number: 3760204

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Quiz 9

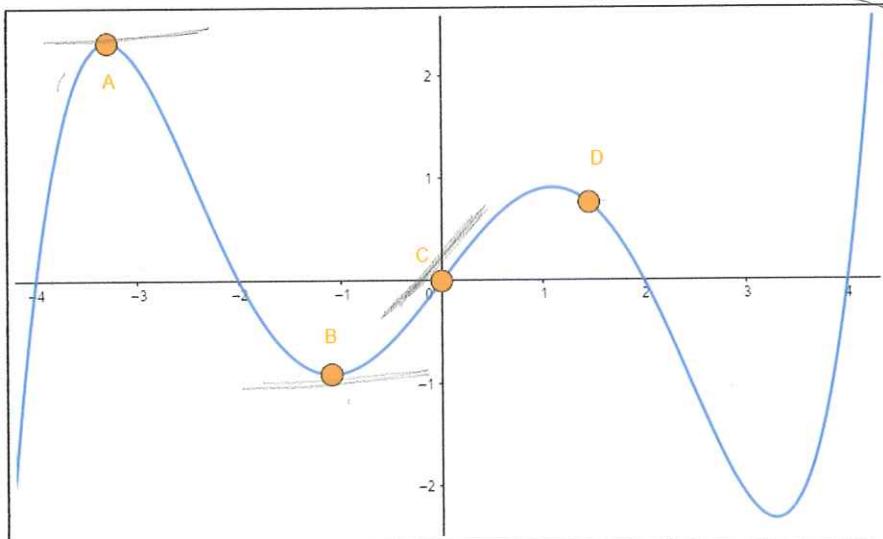
- 1) The function $f(t) = 10e^{3t} - t^3$ describes the position (in meters) of an object at a time t (in seconds). For the next problem, fill in the blank with the appropriate word, given that $f''(0) = -6$.

-6 is the Acceleration of the particle at $t = 0$ seconds.

- 2) Using $f(t)$ from the previous problem, compute $f''(t)$.

$$\begin{aligned} f'(t) &= 3 \cdot 10e^{3t} - 3t^2 \\ &= 30e^{3t} - 3t^2 \quad \rightarrow \quad f'(t) = 30e^{3t} - 3t^2 \\ f''(t) &= 3 \cdot 30e^{3t} - 9t^2 \\ &= 90e^{3t} - 9t^2 \quad \rightarrow \quad f''(t) = 90e^{3t} - 9t^2 \quad m/s^2. \end{aligned}$$

- 3) Below is the graph of a function $g(x)$ with four points on it, A, B, C, and D. Identify a point where $g''(x) < 0$, a point where $g''(x) = 0$, and a point where $g''(x) > 0$.



① set deriv equal to 0
② plug that into 2nd deriv

concave up

A

$$g''(x) < 0$$

C

$$g''(x) = 0$$

B

$$g''(x) > 0$$

* $g''(x) = 0$
could mean when the slope is zero ... OR a point where acceleration is zero bc slope is constant