

Name:

Perm Number:

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

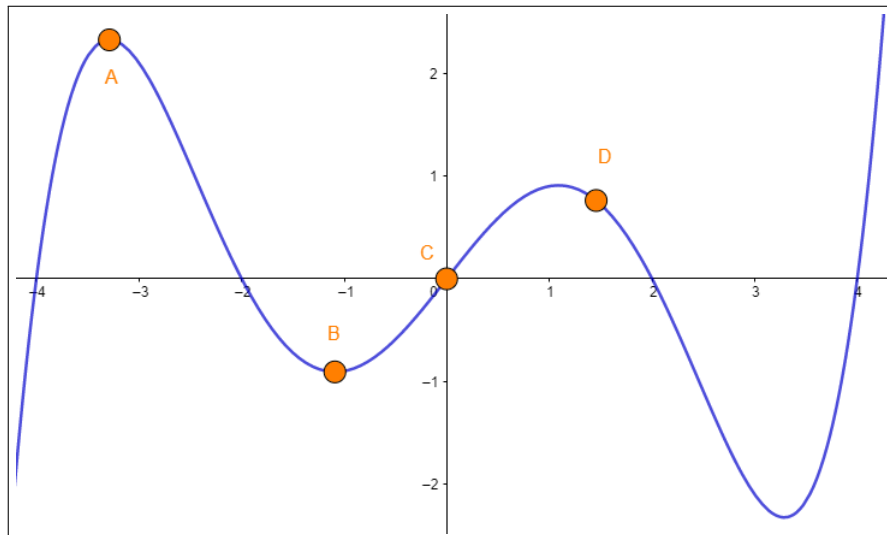
of the particle at $t = 0$ seconds.

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

 $f''(t) =$

 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 $g''(x) > 0$.



 $g''(x) < 0$

 $g''(x) = 0$

 $g''(x) > 0$