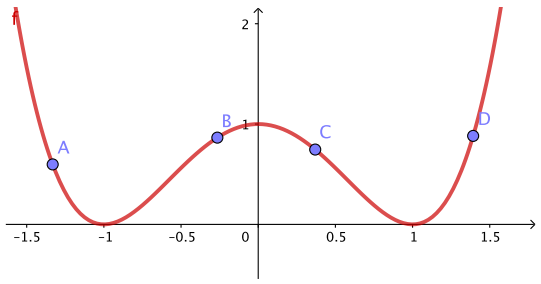
Math 203 Spring 2019 Professor MG
Classwork 6 Name: _____

Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise.

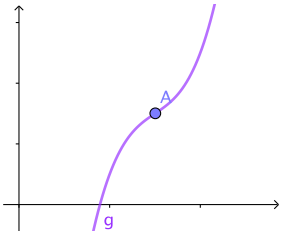
1. Match each point on the left to the description on the right.



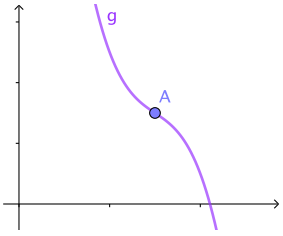
(a) $f' > 0$ and $f'' < 0$
(b) $f' < 0$ and $f'' < 0$
(c) $f' > 0$ and $f'' > 0$
(d) $f' < 0$ and $f'' > 0$

2. Look at the inflection points below and determine the sign of f'' on each side of the inflection point, and also the sign of f' at the inflection point.

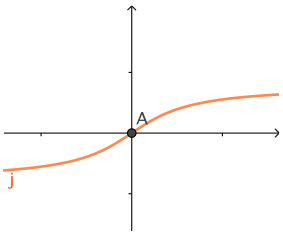
(a)



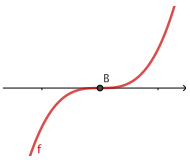
(b)



(c)



(d)



3. Sketch a graph of a function that has the following properties:

- $(0, 6)$, $(2, 3)$, and $(4, 0)$ are on the graph
- $f'(0) = 0$ and $f'(4) = 0$
- $f''(x) < 0$ for $x < 2$, $f''(2) = 0$, and $f''(x) > 0$ for $x > 2$