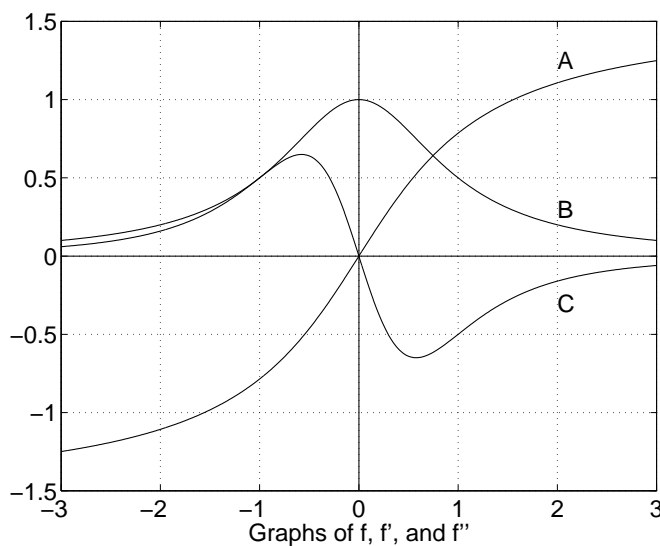


9. (4 points) Let  $f$ ,  $g$  be functions such that  $f''(x) > 0$  and  $g''(x) < 0$  for all  $x$ . In how many points can the graphs of  $f$  and  $g$  intersect? Circle all possible answers.

- (i) no points
- (ii) 1 point
- (iii) 2 points
- (iv) 3 points
- (v) infinitely many points

10. (7 points) (a) The figure below shows graphs of a function  $f$  and its first and second derivatives,  $f'$  and  $f''$ . Identify by the label on the graph which function is  $f$ , which is  $f'$ , and which is  $f''$ .



**A** is the graph of \_\_\_\_

**B** is the graph of \_\_\_\_

**C** is the graph of \_\_\_\_

(b) Give a clear explanation of your reasoning for the choices you made in part (a).