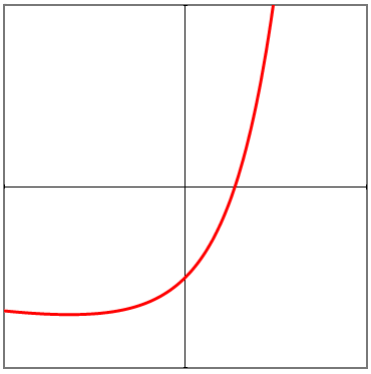
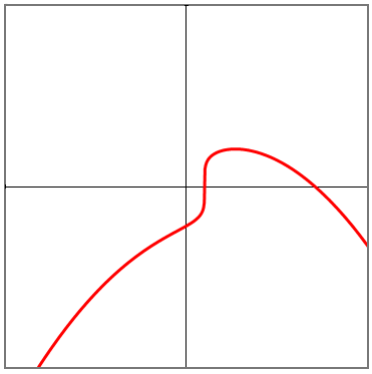
Calculus Practice Sketching #2

Sketch the gradient functions for these functions:

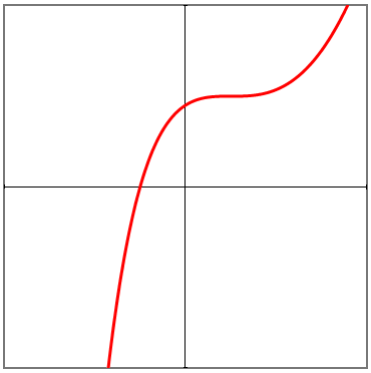
1



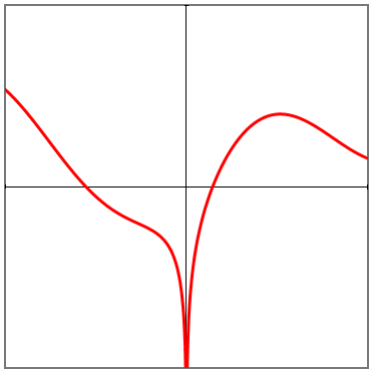
2



3

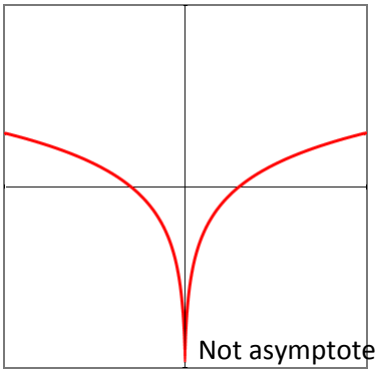


4

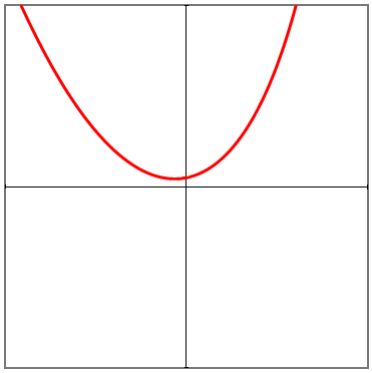


From the gradient functions below, sketch a possible original function:

5

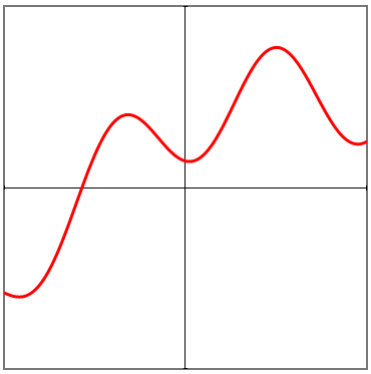


6

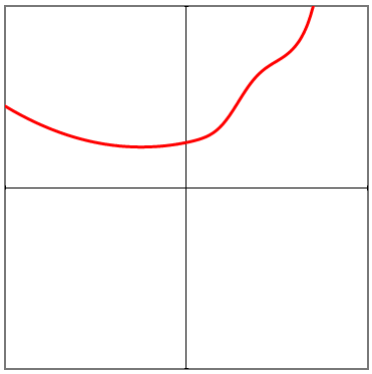


For the functions below, indicate where both $f''(x) = 0$ and also $f'(x) > 0$.

7



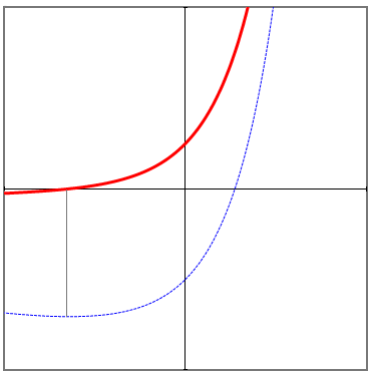
8



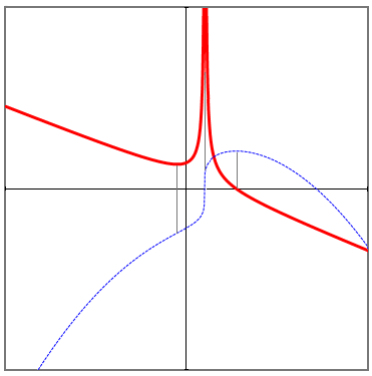
Answers : Calculus Practice Sketching #2

The solid line is the gradient function. The critical sketching points are lined up in grey.

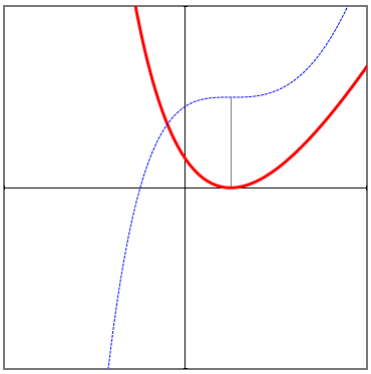
1



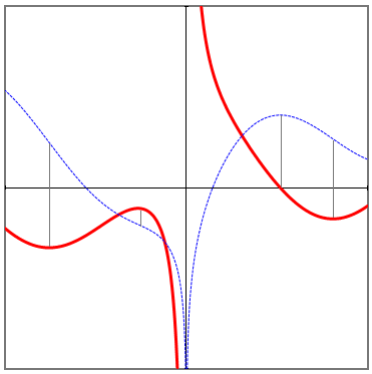
2



3

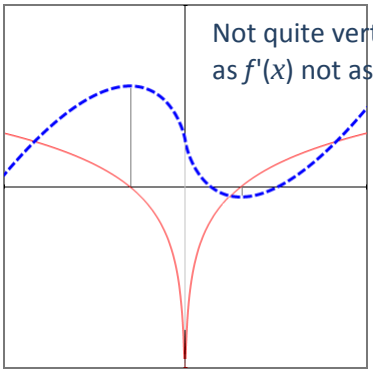


4

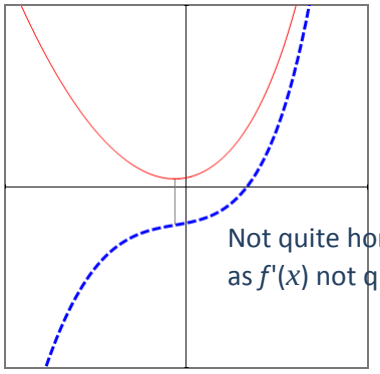


The dotted line is the original function. The critical sketching points are lined up in grey.
(Note that the original can be at any height, as any constant is removed by differentiation.)

5

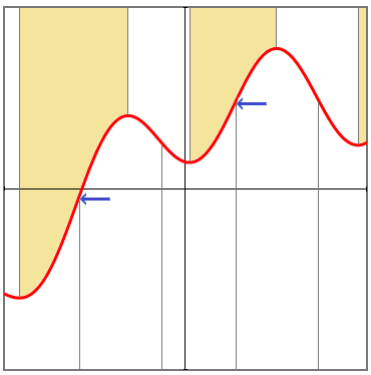


6



Shaded where $f'(x) > 0$, lines where $f''(x) = 0$, so arrows show where both are true.

7



8