How to sketch the graph of f' given the graph of f

When first learning to sketch the graph of a derivative function f',
if you try to do it only by intuition,
oftentimes, you will find yourself sketching a graph parallel to f instead.

CONCEPTS

1. Where the graph of f is going upwards to the right,
the slope / derivative is positive,
so the graph of f' should be above the $x-$axis.

   Where the graph of f is going downwards to the right,
the slope / derivative is negative,
so the graph of f' should be below the $x-$axis.

2. Where the graph of f is steeper (*),
the slope / derivative has a large size / absolute value,
so the graph of f' should be farther from the $x-$axis.

   Where the graph of f is flatter (**),
the slope / derivative has a large size / absolute value,
so the graph of f' should be closer to the $x-$axis.

3. Where the graph of f is a line,
the slope / derivative doesn't change,
so the graph of f' should be constant / horizontal.

   In particular, where the graph of f is a horizontal line,
the slope / derivative is 0,
so the graph of f' should be 0 / along the $x-$axis.

4. Where the graph of f has a horizontal tangent line,
the slope / derivative is 0,
so the graph of f' should be at the $x-$axis.

   Where the graph of f has a vertical tangent line or vertical asymptote,
the slope / derivative is approaching either positive or negative infinity,
so the graph of f' should have a vertical asymptote.
The behavior of the graph of f just to the left and right of the vertical tangent line determines
if the graph of f' should be going to positive or negative infinity on each side of the asymptote.

   Where the graph of f has a jump or removable discontinuity, or a cusp,
the slope / derivative is undefined,
so the graph of f' should not have a point for that $x-$coordinate.
The behavior of the graph of f just to the left and right of the discontinuity determines
if the graph of f' should be going to a positive or negative number, or to positive or negative infinity
on each side of the discontinuity.

(*) "steep" means rising / falling quickly, like the side of a tall mountain

(**) "flat" means rising / falling slowly, like the ramp in front of the front door of a building

PROCESS

A. Identify all $x-$coordinates on the graph of f where there are

i. horizontal tangent lines
the graph of f' should be at the $x-$axis at those $x-$coordinates

ii. vertical tangent lines or asymptotes
the graph of f' should have a vertical asymptote at those $x-$coordinates

iii. jump or removable discontinuities or cusps
the graph of f' should not have a point at those $x-$coordinates

B. Between the $x-$coordinates you identified in A

i. If the graph of f is going steeply upwards to the right,
the graph of f' should be farther above the $x-$axis

ii. If the graph of f is going slowly upwards to the right,
the graph of f' should be closer above the $x-$axis

iii. If the graph of f is going steeply downwards to the right,
the graph of f' should be farther below the $x-$axis

iv. If the graph of f is going slowly downwards to the right,
the graph of f' should be closer below the $x-$axis

As the graph of f changes its behavior,
the graph of f' should

be above the $x-$axis as the graph of f goes upwards to the right
be below the $x-$axis as the graph of f goes downwards to the right

AND

move farther from the $x-$axis as the graph of f gets steeper
move closer to the $x-$axis as the graph of f gets flatter