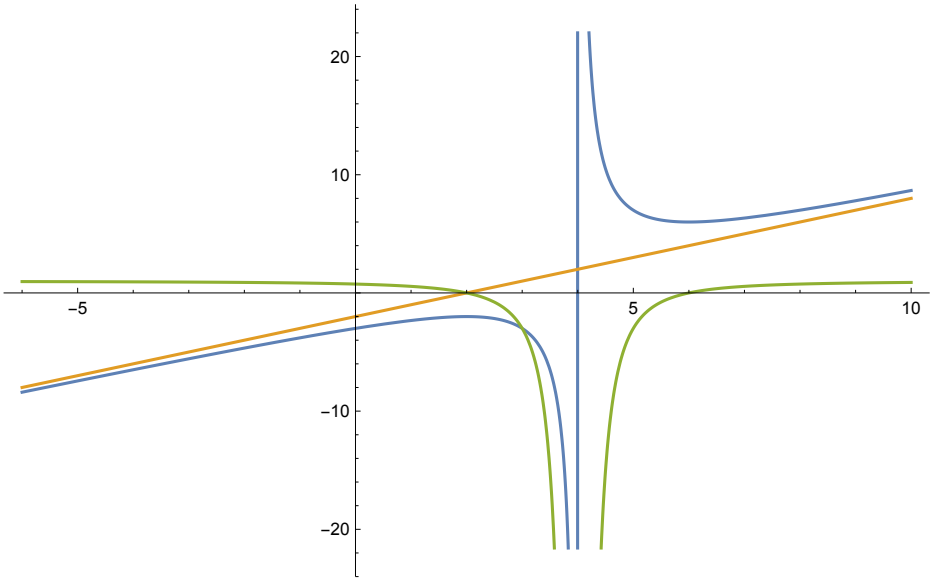
```
(* Quiz 15 *)

f[x_] := (x^2 - 6 x + 12) / (x - 4);

Simplify[f'[x]]
```

$$\frac{12 - 8\,x + x^2}{(-4 + x)^2}$$

```
Simplify[f''[x]]
```

$$\frac{8}{(-4 + x)^3}$$

```
Plot[{f[x], x - 2, f'[x]}, {x, -6, 10}]
```




```
g[x_] := (-x^2 - 4 x - 7) / (x + 3);

Simplify[g'[x]]
```

$$-\frac{5 + 6\,x + x^2}{(3 + x)^2}$$

```
Simplify[g''[x]]
```

$$-\frac{8}{(3 + x)^3}$$

```
Plot[{g[x], g'[x], g''[x]}, {x, -8, 5}]
```