As h gets smaller, the absolute error also gets smaller but only up until a certain point. After which, it starts to increase again - this is the same for both functions. This is because of the equation:

```
2Cf(x)/h + 1/2 hf'(x)
```

From here we see that, as one term gets smaller, the other will get larger. So, basically there will be some value of h where it is useless to get smaller and smaller.