Name: $\qquad$ Date: $\qquad$

| Learning Goal 4.1 | Using derivative tests for curve sketching. |
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## More Questions

1. For the following functions, find the inflection points, the intervals over which the function is concave up or down, and use $f^{\prime \prime}(x)$ to find any local extrema.
a. $\quad f(x)=3 x^{4}-4 x^{3}$
b. $f(x)=x^{2 / 3}(6-x)^{1 / 3}$
c. $\quad f(x)=\frac{1}{x^{2}+1}$
d. $f(x)=x+\frac{1}{x}$
e. $f(x)=\sin x+\cos x$
