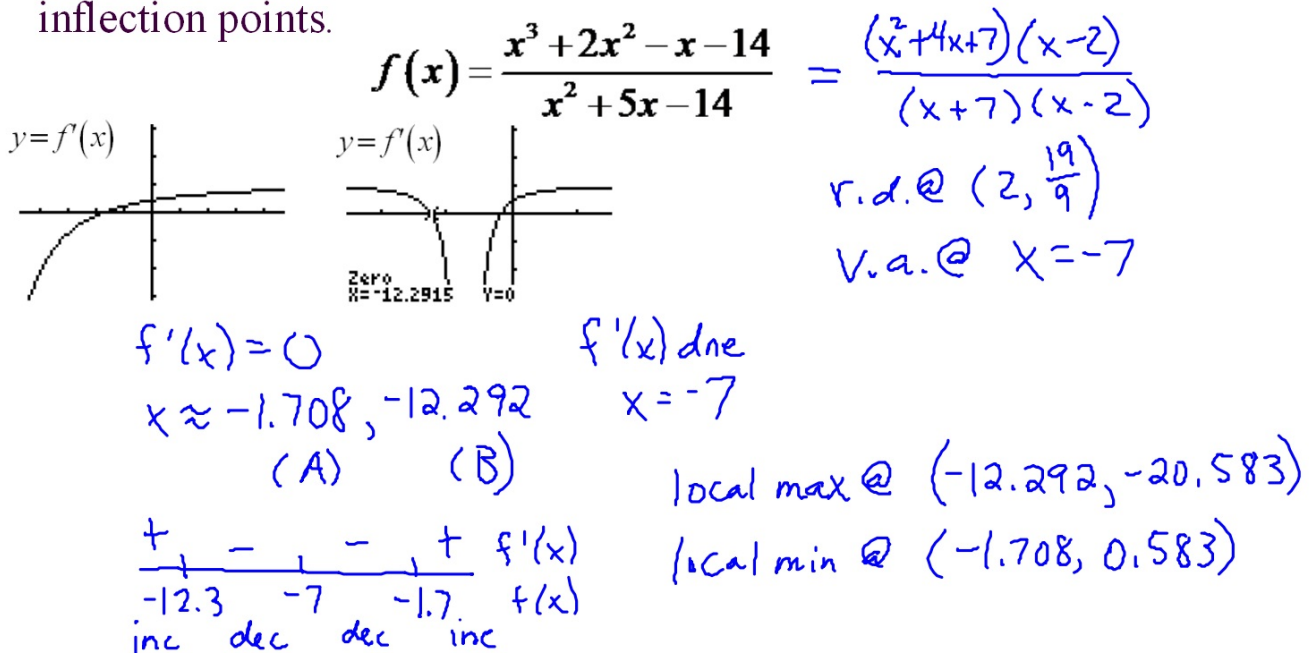
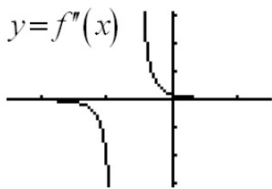


Graphing with Calculus and Calculators

Use technology (appropriately) to produce a hand-drawn sketch that displays all important aspects of the curve. In particular, use graphs of the first and second derivatives to estimate the intervals of increase/decrease, extreme values, intervals of concavity, and inflection points.



$$f(x) = \frac{x^3 + 2x^2 - x - 14}{x^2 + 5x - 14}$$



$f''(x) = 0$
never

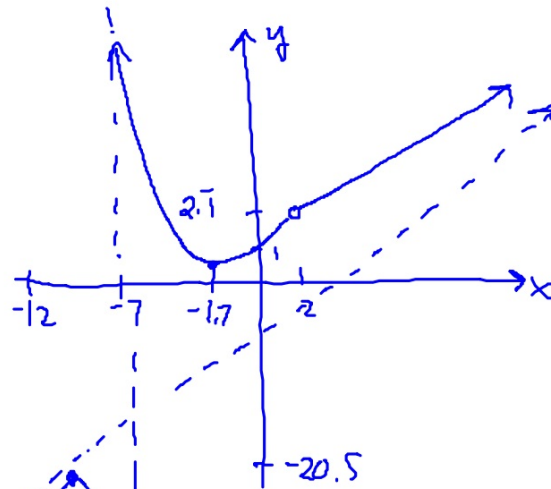
$f''(x)$ dne
 $x = -7$

-	+	$f''(x)$
C.D.	C.U.	$f(x)$

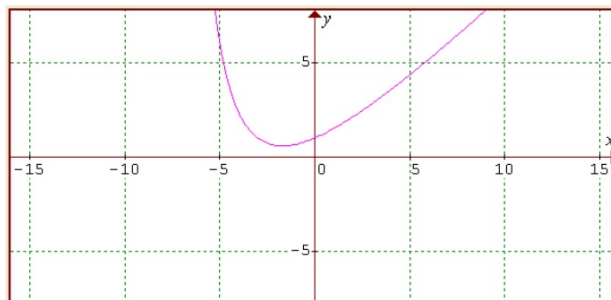
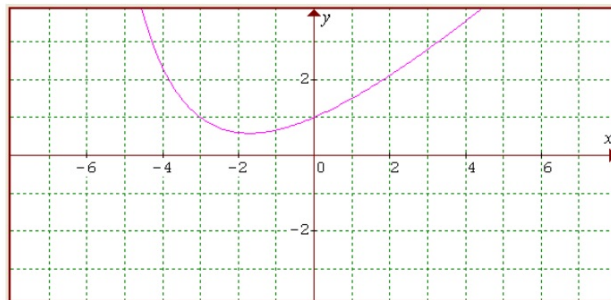
no points of inflection

end behavior

$$\begin{array}{r}
 x-3 \\
 x^2+5x-14 \overline{) x^3+2x^2-x-14} \\
 \underline{-(x^3+5x^2-14x)} \\
 -3x^2+15x-14 \\
 \underline{-(-3x^2-15x+42)} \\
 28x-56
 \end{array}$$



s.a. @ $y = x - 3$



a complete graph \rightarrow

