Question

Function: $f\left(x\right)=\frac{\left(3x-4\right)}{\left(x+6\right)}$. Domain: $x\in\left(-\infty,-6\right)\cup\left(-6,\infty\right)$.

First derivate: $f^{'}\left(x\right)=\frac{3\cdot\left(x+6\right)-1\cdot\left(3x-4\right)}{\left(x+6\right)^{2}}=\frac{3x+18-3x+4}{\left(x+6\right)^{2}}=\frac{22}{\left(x+6\right)^{2}}$.

Second derivate: $f^{''}\left(x\right)=\frac{-22\cdot2\cdot\left(x+6\right)}{\left(x+6\right)^{4}}=-\frac{44}{\left(x+6\right)^{3}}$.

We have:

Interval	$f^{'}\left(x\right)$	$f^{''}\left(x\right)$
$-\infty<x<-6$	+	+
$-6<x<\infty$	+	-

So, the concave intervals:

Concave up: $x\in\left(-\infty,-6\right)$.

Concave down: $x\in\left(-6,\infty\right)$.

Inflection point: second derivate change its sign at $x=-6$, but $x=-6$ isn't in the domain of the function, so, there is no any inflection points.

Answer: concave up: $x\in\left(-\infty,-6\right)$; concave down: $x\in\left(-6,\infty\right)$; inflection point: there no any inflection points.