```
Exit[]
```

```
$Assumptions = x ∈ Reals
```

```
x ∈ Reals
```

Alternative utility-function

```
f[k_, x_] := k x - Sqrt[1 + k^2 x^2]
ra[f_] := -Simplify[D[f[k, x], {x, 2}] / D[f[k, x], x]]
```

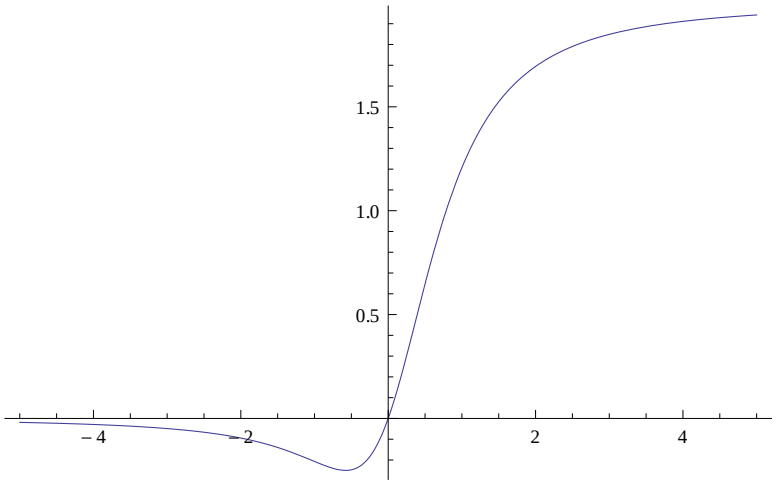
```
Simplify[Expand[x ra[f]]]
```

$$k\,x\left(\frac{k\,x}{1+k^2\,x^2}+\frac{1}{\sqrt{1+k^2\,x^2}}\right)$$

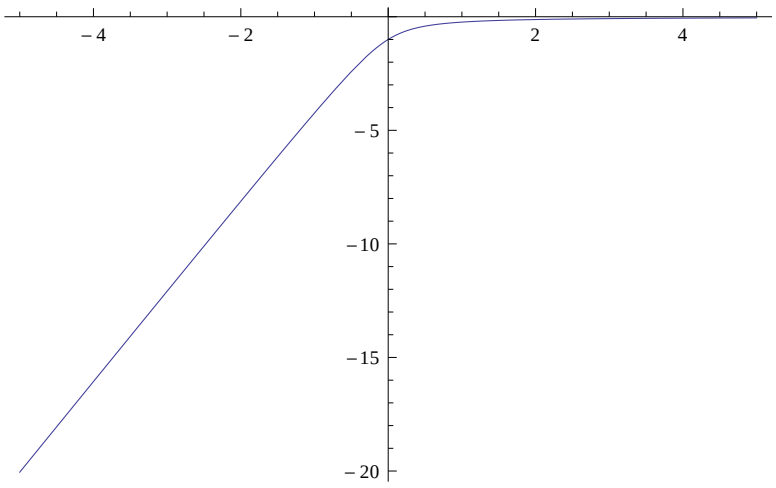
```
k =.; ra[f] /. x → 0
```

```
k
```

```
raf = ra[f]; k = 1; Plot[{x raf}, {x, -5, 5}]
```




```
k = 2; Plot[{f[k, x]}, {x, -5, 5}]
```



```
k = 2; Plot[raf, {x, -5, 5}]
```