

```
> restart;  
> f:=x-(x^2+4)/(3*x^2-5);
```

$$f:=x \rightarrow \frac{x^2+4}{3x^2-5}$$

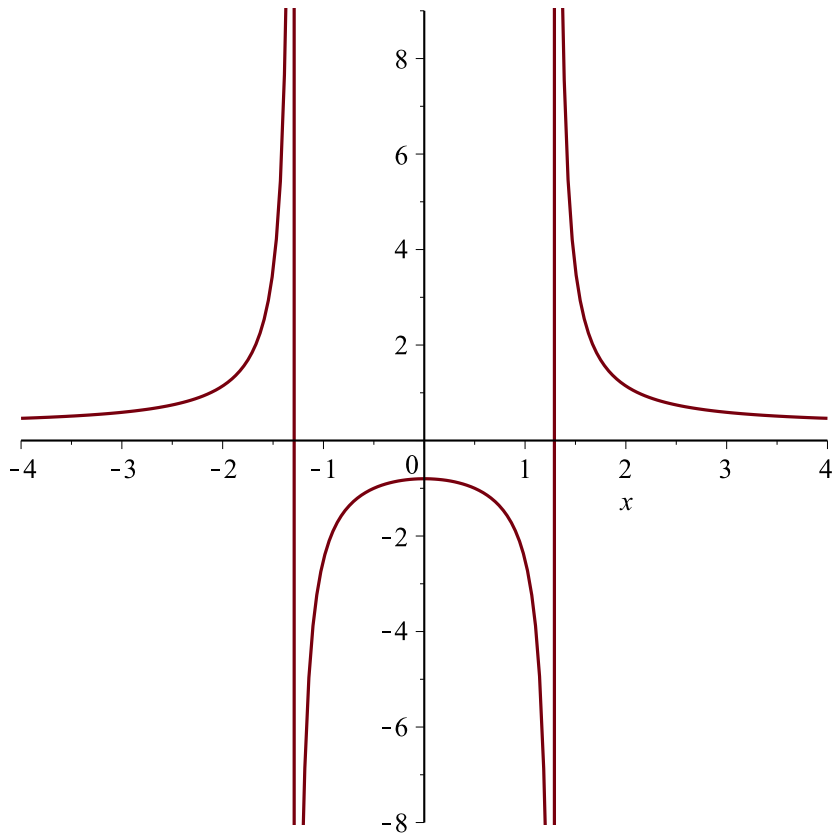
(1)

```
> f(2);
```

$$\frac{8}{7}$$

(2)

```
> plot(f(x), x=-4..4);
```

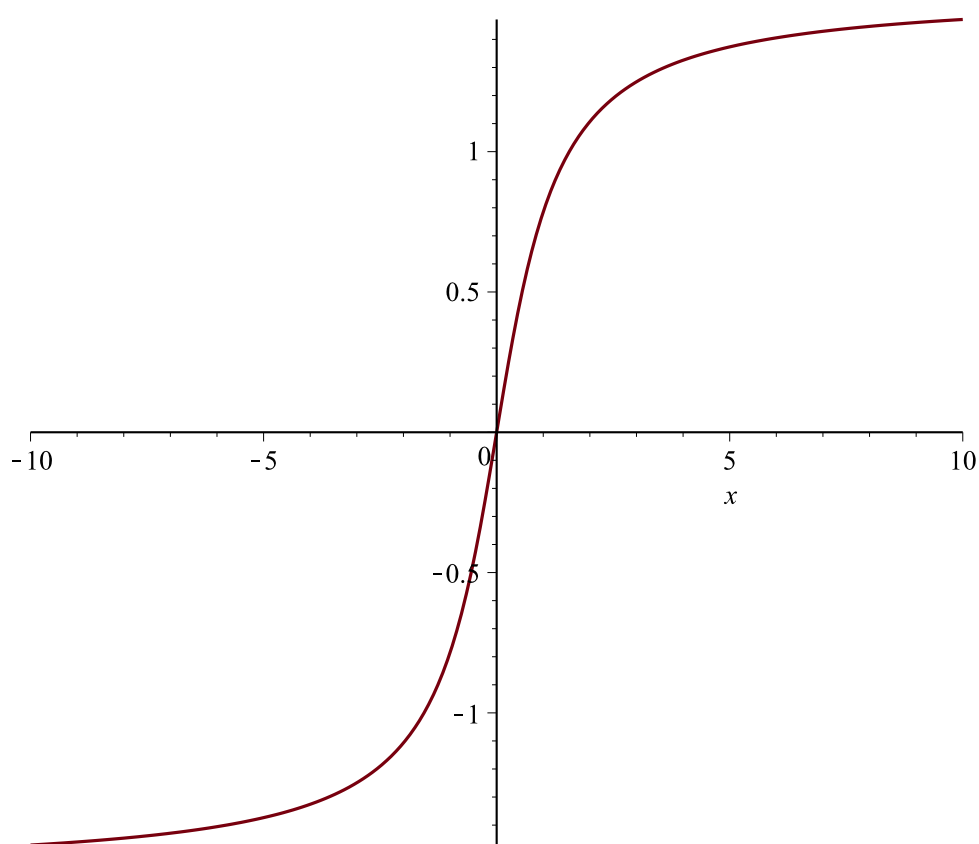


```
> limit(f(x), x=infinity);
```

$$\frac{1}{3}$$

(3)

```
> plot(arctan(x), x=-10..10);
```



```
> limit(arctan(x), x=infinity);
```

$$\frac{1}{2} \pi$$

(4)

```
> limit(sqrt(2*x^2+1)/(3*x-5), x=infinity);
```

$$\frac{1}{3} \sqrt{2}$$

(5)

```
> limit(exp(-x), x=infinity);
```

$$0$$

(6)

```
> solve({4*a-2*b+3=4, 12-a+b=9*a-3*b+3}, {a,b});
```

$$\left\{ a = \frac{7}{2}, b = \frac{13}{2} \right\}$$

(7)