

Linear function:

$$f(x) = a \cdot x + b$$

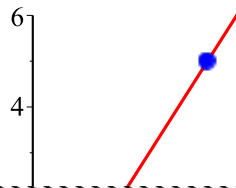
$$a, b \in \mathbb{R}, \quad Dm(f) = \mathbb{R} \quad Vm(f) = \mathbb{R}$$

When $a < 0$ $f(x)$ is decreasing,

When $a = 0$ $f(x)$ is constant,

When $a > 0$ $f(x)$ is increasing.

$$f(x) = 2 \cdot x - 1$$



If x is

The a (or slope)

In the equation

$$\Delta f =$$

$$\Delta y =$$

From page 1, we have: $\Delta y = a \cdot \Delta x$ (1)

When $\Delta x = 1$, (1) gives, $\Delta y = a$.

graph
show

When
 $\Delta x =$

Linea

Exa

In this
Furthe

If we
variab

This o
of the

The calculation of a and b :

we know two points on a line: $f(-1) = -3$ and $f(3) = 5$.

$(x_1, y_1) = (-1, -3)$ and $(x_2, y_2) = (3, 5)$

From (1) $\Delta y = a \cdot \Delta x$, we get: $a = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$

ie. $a =$

The equ

When th

$5 = 2 \cdot 3$

ie. $a =$

The equ

