Task:
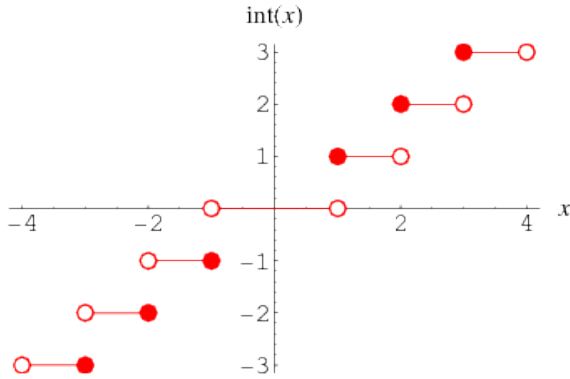
If f(x) = int(x), find the given functional value.

f(-14.321)

Solution:

The function *int(x)* gives the integer part of *x*.

It is related to the floor and ceiling functions: $\lfloor x \rfloor$ and $\lceil x \rceil$ by

$$\text{int}(x) = \begin{cases} \lfloor x \rfloor & \text{for } x \geq 0 \\ \lceil x \rceil & \text{for } x < 0. \end{cases} \qquad (1)$$

The integer part function satisfies

$$\text{int}(-x) = -\text{int}(x)$$

Proceeding from the above $f(-14.321) = \lceil -14.321 \rceil = -15.000$

Answer: -15