

As per IEEE 754vv floating points can be rounded

1) Round to nearest even.

In this mode given floating point always rounded to its nearest even number.

Ex: i)  $16.5 \rightarrow 16$  ii)  $17.5 \rightarrow 18$ .

2) Round to nearest number which is away from zero.

In this mode given floating point always rounded to a which is away from "0".

Ex: i)  $-3.5 \rightarrow -4$  ii)  $3.5 \rightarrow 4$ .

3) Round up (towards  $+\infty$ )

In this mode mode given floating point rounded to a greater number than it.

Ex: i)  $-3.5 \rightarrow -3$  ii)  $3.5 \rightarrow 4$ .

4) Round down (towards  $-\infty$ )

In this mode given floating point rounded to a less number than it.

Ex: i)  $-3.5 \rightarrow -4$  ii)  $3.5 \rightarrow 3$ .

5) Round towards zero.

In this mode given floating point we always try to round to a number which is nearest to zero.

Ex: i)  $-3.5 \rightarrow -3$  ii)  $3.5 \rightarrow 3$ .