**Syntax**

```
numeric matrix edittoint(numeric matrix Z, real scalar amt)
void _edittoint(numeric matrix Z, real scalar amt)
```

```
numeric matrix edittointtol(numeric matrix Z, real scalar tol)
void _edittointtol(numeric matrix Z, real scalar tol)
```

**Description**

These edit functions set elements of matrices to integers that are close to integers.

```
edittoint(Z, amt) and _edittoint(Z, amt) set
Z_{ij} = \text{round}(Z_{ij}) \quad \text{if } |Z_{ij} - \text{round}(Z_{ij})| \leq |\text{tol}|
```

for Z real and set

```
\text{Re}(Z_{ij}) = \text{round}(\text{Re}(Z_{ij})) \quad \text{if } |\text{Re}(Z_{ij}) - \text{round}(\text{Re}(Z_{ij}))| \leq |\text{tol}|
```

```
\text{Im}(Z_{ij}) = \text{round}(\text{Im}(Z_{ij})) \quad \text{if } |\text{Im}(Z_{ij}) - \text{round}(\text{Im}(Z_{ij}))| \leq |\text{tol}|
```

for Z complex, where in both cases

```
tol = \text{abs}(\text{amt}) * \epsilon \text{sum}(\text{abs}(Z)) / (\text{rows}(Z) * \text{cols}(Z))
```

edittoint() leaves Z unchanged and returns the edited matrix. _edittoint() edits Z in place.

edittointtol(Z, tol) and _edittointtol(Z, tol) do the same thing, except that tol is specified directly.

**Remarks and examples**

These functions mirror the edittozero() functions documented in [M-5] edittozero(), except that, rather than solely resetting to zero values close to zero, they reset to integer values close to integers.

See [M-5] edittozero(). Whereas use of the functions documented there is recommended, use of the functions documented here generally is not. Although zeros commonly arise in real problems so that there is reason to suspect small numbers would be zero but for roundoff error, integers arise more rarely.
If you have reason to believe that integer values are likely, then by all means use these functions.

**Conformability**

\( \text{edittoint}(Z, \text{amt}) : \)

- **Z:** \( r \times c \)
- **amt:** \( 1 \times 1 \)
- **result:** \( r \times c \)

\( \text{_edittoint}(Z, \text{amt}) : \)

- **input:**
  - **Z:** \( r \times c \)
  - **amt:** \( 1 \times 1 \)

- **output:**
  - **Z:** \( r \times c \)

\( \text{edittointtol}(Z, \text{tol}) : \)

- **Z:** \( r \times c \)
- **tol:** \( 1 \times 1 \)
- **result:** \( r \times c \)

\( \text{_edittointtol}(Z, \text{tol}) : \)

- **input:**
  - **Z:** \( r \times c \)
  - **tol:** \( 1 \times 1 \)

- **output:**
  - **Z:** \( r \times c \)

**Diagnostics**

None.

**Also see**

- [M-5] \text{edittozero()} — Edit matrix for roundoff error (zeros)
- [M-4] \text{manipulation} — Matrix manipulation