

## Truncation and rounding

To round a number to the nearest N number place:

- 1) divide the number by N
- 2) add .5 (for negative numbers subtract .5)
- 3) truncate the result
- 4) multiply the result by N

eg: to round 758.43 to nearest 10's

- 1)  $758.43 / 10 = 75.843$
- 2)  $75.843 + .5 = 76.343$
- 3)  $\text{INT}(76.343) = 76$
- 4)  $76 * 10 = 760$

eg: to round 7.5843 to nearest 1/100

- 1)  $7.5843 / 1/100 = 758.43$
- 2)  $758.43 + .5 = 758.93$
- 3)  $\text{INT}(758.93) = 758$
- 4)  $758 * 1/100 = 7.58$

## RECIPROCAL

The reciprocal of a number X =  $X * (1/X) / X$ .

$$\begin{aligned} \text{ie. reciprocal of } 8 &= 1/8 \\ &= 0.125 \\ 8 * (1/8) / 8 & \\ &= (8 * .125) / 8 \\ &= 1 / 8 \\ &= 0.125 \end{aligned}$$

Useful if calculator doesn't have 1/X function.

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