

EXPECTED LOSS**PURPOSE**

Compute the expected loss for a variable.

DESCRIPTION

The expected loss computes the number of defectives for a variable (i.e., the number of values that fall outside of some user specified tolerance limits) and multiplies that by a user specified cost.

SYNTAX

```
LET <par> = EXPECTED LOSS <y>              <SUBSET/EXCEPT/FOR qualification>
where <y> is a response variable;
      <par> is a parameter where the computed expected loss is stored;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.
```

EXAMPLES

```
LET A = EXPECTED LOSS Y1
LET A = EXPECTED LOSS Y1 SUBSET TAG > 2
```

NOTE

The upper and lower specification limits must be specified by the user as follows:

```
LET LSL = <value>
LET USL = < value>
```

The cost value must be specified as follows:

```
LET USLCOST = <value>
```

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

EXPECTED LOSS PLOT	=	Generate an expected loss versus subset plot.
CONTROL CHART	=	Generate a control chart.
CP	=	Compute the CP index.
CPK	=	Compute the CPK index.
PERCENT DEFECTIVE	=	Compute the percentage of defectives for a sample.

REFERENCE

"Guide to Quality Control," Kaoru Ishikawa, Asian Productivity Organization, 1982 (chapter 13).

APPLICATIONS

Quality Control

IMPLEMENTATION DATE

90/12

PROGRAM

```
SKIP 25
READ GEAR.DAT DIAMTER
LET USL = 1.01
LET LSL = .99
LET USLCOST = 10
LET A = EXPECTED LOSS DIAMETER
```