RECPPF

PURPOSE
Compute the reciprocal probability density function.

DESCRIPTION
The probability density function is:

$$f(x, b) \ = \ \frac{1}{x \log(b)} \qquad\qquad 1/b \le x < 1, b > 1 \qquad\qquad \textbf{(EQ Aux-299)}$$

where b is the shape parameter. The formula for the percent point function is:

$$G(p, b) \ = \ e^{\log(b)(p-1)} \qquad\qquad 0 \le p < 1, b > 1 \qquad\qquad \textbf{(EQ Aux-300)}$$

SYNTAX
LET <y> = RECPPF(<p>,<b>)   <SUBSET/EXCEPT/FOR qualification>
where <p> is a variable, a number, or a parameter in the range (0,1);
    <y> is a variable or a parameter (depending on what <p> is) where the computed reciprocal ppf value is saved;
    <b> is a number, parameter, or variable that specifies the shape parameter;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
LET A = RECPPF(0.5,1.5)
LET X2 = RECPPF(P,B)

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS
RECCDF	=	Compute the reciprocal cumulative distribution function.
RECPDF	=	Compute the reciprocal probability density function.
BRACDF	=	Compute the Bradford cumulative distribution function.
BRAPDF	=	Compute the Bradford probability density function.
BRAPPF	=	Compute the Bradford percent point function.
BETCDF	=	Compute the beta cumulative distribution function.
BETPDF	=	Compute the beta probability density function.
BETPPF	=	Compute the beta percent point function.

REFERENCE
"Numerical Methods for Scientists and Engineers", 2nd. Ed., Hamming, Dover Publications, 1973.

APPLICATIONS
Data Analysis

IMPLEMENTATION DATE
96/5

PROGRAM
```
MULTIPLOT 2 2; MULTIPLOT CORNER COORDINATES 0 0 100 100
TITLE AUTOMATIC
Y1LABEL X
X1LABEL PROBABILITY
LET B = 10
X1LABEL  BETA = ^B
PLOT RECPPF(P,B) FOR P = 0 0.01 0.99
LET B = 100
X1LABEL  BETA = ^B
PLOT RECPPF(P,B) FOR P = 0 0.01 0.99
LET B = 5
X1LABEL  BETA = ^B
PLOT RECPPF(P,B) FOR P = 0 0.01 0.99
LET B = 2
X1LABEL  BETA = ^B
PLOT RECPPF(P,B) FOR P = 0 0.01 0.99
END OF MULTIPLOT
```