

# MEASERR

mean, quadratic, geometric, harmonic mean, st.dev. of list (0.1s)	<pre> RAD XYZ DEC R= 'X' {HOME MEASERR}  USR 7: 6:      {1 2 3 4 5 6 7 8 9 10} 5:      5.5 4:      6.204836823 3:      4.52872868812 2:      3.41417152147 1:      3.0276503541 EList Lmean Lqhed Lgheo Lhnea Lsdev </pre>	<pre> 8: 7: 6:      0.5<sup>3</sup>·SIN(Y) 5:      EX Y3 4:      0.5<sup>3</sup>·√3·0.5<sup>3</sup>·SIN(Y)<sup>2</sup>+0.5<sup>3</sup>·0.5<sup>3</sup>·COS(Y)<sup>2</sup> 3:      0.5<sup>3</sup>·SIN(Y) 2:      EX Y3 1:      1013·0.5<sup>3</sup>·SIN(Y)·1+0.5<sup>3</sup>·1+0.5<sup>3</sup>·COS(Y) Errx Errn Errh Errg Errt Errm Errh </pre>
Terrmean: mean value and mean error of expression with given xk Δxk (2s)	<pre> 8: 7: 6: 5:      X<sup>3</sup>·SIN(Y) 4:      {X Y} 3:      {1.2. .1.2} 2:      F: .909297426826 1:      ΔF: .285203594861 Errx Errn Errh Errg Errt Errm Errh </pre>	<pre> 8: 7: 6: 5:      X<sup>3</sup>·SIN(Y) 4:      {X Y} 3:      {1.2. .1.2} 2:      F: .909297426826 1:      ΔF: .356018595357 Errx Errn Errh Errg Errt Errm Errh </pre>
Terrmax: mean value and maximal error		
Error at 50% confidence level (5s)	<pre> RAD XYZ DEC R= 'X' {HOME MEASERR}  USR 6: 5: 4: 3:      X<sup>3</sup>·SIN(Y) 2:      {5.1 4.9 5.5 2.4 9.5} 1:      F: 105.183873101 ΔF50%: 2.01788615404 Errx Err50 Err95 Err99 Tval HelpH </pre>	<pre> RAD XYZ DEC C= 'X' {HOME MEASERR}  USR 6: 5: 4: 3:      X<sup>3</sup>·SIN(Y) 2:      {5.1 4.9 5.5 2.4 9.5} 1:      F: 105.183873101 ΔF95%: 5.86366832954 Errx Err50 Err95 Err99 Tval HelpH </pre>
Error at 95% confidence level (5s)		
Error at 95% confidence level (5s)	<pre> RAD XYZ DEC R= 'X' {HOME MEASERR}  USR 6: 5: 4: 3:      X<sup>3</sup>·SIN(Y) 2:      {5.1 4.9 5.5 2.4 9.5} 1:      F: 105.183873101 ΔF99%: 7.7061664545 Errx Err50 Err95 Err99 Tval HelpH </pre>	<pre> 8: 7: 6: 5: 4: 3:      X<sup>3</sup>·SIN(Y) 2:      {1 2} 1:      .909297426826 Errx Err50 Err95 Err99 Tval HelpH </pre>
Tval: term value (0.5s)		
HelpMEASERR: help	<pre> MEASERR: MEASUREMENT-ERRORS  EList  - + { } DATALIST Lmean  {} + 1/n×Xi MEAN Lqhed  {} + √(1/n×Xi<sup>2</sup>) Lgheo  {} + (Xi)<sup>3</sup>·(1/n) Lhnea  {} + n/Σ(1/Xi) Lsdev  {} + √(1/(n-1)×Σ(Xi-Σ)<sup>2</sup>) STANDARDDEVIATION  GRAPH          OK </pre>	<pre> Errx - + F { } EXAMPLE Errmean, 'F(XN,AN)' EX1..XN3 + * Errmax MEAN, MAXIMAL ERROR Terrx - + F { } { } EXAMPLE Terrmean, 'F(XN,AN)' EX1..XN3 Terrmax EX01..XN3 +X01..XN3 + F ΔF MEAN, MAX ERROR Ex2 EXAMPLE 'F' EX3C33 Err50,95,99% 'F' EX3..3 + F ΔF 50,95,99% CONFID. LEVEL NORMAL DISTRIBUTION Tval 'F(X1..XN3)' EX1..XN3 + GRAPH          OK </pre>