Metric	Name / Description	Additional Description	Notes	Threshold	Min Value	Max Value	Reason For Threshold
ac	Actual Complexity	The number of executed cyclomatic paths	Requires coverage results	10.00	0	v(G)	Equals threshold of 10 set for v(G)
all_code	All Lines of code	(Blanks + Comments + Code)	Only calculated if -HALSTEAD is specified	60.00	0	Infinity	60 lines represents 1 printed page of listing- generally accepted to be a good length for readable code
blanks	Blank lines		Only calculated if -HALSTEAD is specified	10.00	0	Infinity	Well Spaced code should have about 1/6 ratio of blank lines - threshold for all_code of 60 implies 10 threshold for blanks
branch	Logical branches		Always calculated	19.00	1	Infinity	Correlates to threshold for v(G) of 10 - which would equal 19 branches
call_pair	Call Pairs	Executable calls between modules (lines in Battlemap)	Always calculated	100.00	0	Infinity	Arbitrary threshold of 100
call_pair_cov	Call Pairs Covered	Executed calls between modules	Always calculated	100.00	0	call_pair	Equal to threshold for call_pair
cd	Condition Decision metric		Only calculated if -BOOL is specified	19.00	0	Infinity	Correlates to threshold for v(G) of 10 - which would equal 19 branches
cdc	Condition Decision Coverage metric		Only calculated if -BOOL is specified and boolean coverage is collected	19.00	0	cd	Correlates to threshold for v(G) of 10 - which would equal 19 branches
changed_numeric	McCabe Change changed status	Set to 0 or 1 to indicate whether module is changed since last parse	Only available if McCabe Change is licensed	1.00	0	1	changed_numeric is a truth value (0 or 1)
code	Lines of code		Only calculated if -HALSTEAD is specified	30.00	0	Infinity	Equals 60 total lines minus 10 comment lines minus 10 blank lines minus 10 mixed lines
comments	Lines of comments		Only calculated if -HALSTEAD is specified	10.00	0	Infinity	Well commented code should have about 1/6 ratio of comment lines - threshold for all_code of 60 implies 10 threshold for comments
cyclomatic_density	v(G) / code	Related to "logic density" - the amount of logic per source line	Always calculated	0.14	0	Infinity	Represents a decision every 7 lines approx.
dec	Decision Count		Only calculated if -BOOL is specified	9.00	0	Infinity	Correlates to threshold for v(G) of 10 - which would equal 9 decisions
dec_cov	Decision Count Coverage		Only calculated if -BOOL is specified and boolean coverage is collected	9.00	0	dec	Correlates to threshold for v(G) of 10 - which would equal 9 decisions
decision_density	Decision Density	(cd / dec)	Only calculated if -BOOL is specified	3.00	0	Infinity	Represents a threshold of 3 conditions per decision
design_density	Design Density (iv(G) / v(G))	Design Complexity (number of paths which call something) divided by Cyclomatic Complexity (total paths)	Always calculated	0.70	0	1	
dr	Data Reference count	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	18.00	0	Infinity	
dr_severity	dr / Total data references	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	1.80	0	Infinity	
dv	Data Complexity (path) count	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	7.00	0	v(G)	
dv_severity	dv / v(G)	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	0.70	0	1	Corresponds to dv threshold of 7 divided by v(G) threshold of 10
edges	Edges in Flowgraph		Always calculated	100.00	1	Infinity	Arbitrary threshold of 100
essential_density	ev(G) -1 divided by v(G) -1		Always calculated	0.40	0	1	Corresponds to v(G) threshold of 10 and ev(G) threshold of 4

Metric	Name / Description	Additional Description	Notes	Threshold	Min Value	Max Value	Reason For Threshold
evg	Essential Complexity	The complexity of the reduced flowgraph (from which structured constructs have been removed)	Always calculated	4.00	1	v(G)	This threshold is dependant upon language, and whether flowgraph expansion (-SUPPRESS) is used or not. 4 is a good low threshold though for most purposes
gdv	Global Data Complexity	The complexity of the global data reduced flowgraph (count of paths through global data)	Only calculated if McCabe Data is licensed and -DATA is specified	4.00	1	v(G)	
gdv_severity	sdv(G) divided by gdv(G)	The proportion of total logic related to global data logic	Only calculated if McCabe Data is licensed and -DATA is specified	1.00	0	Infinity	Arbitrary threshold of 1.0
global_data_density	gdv(G) divided by v(G)	The proportion of global data logic out of the total logic	Only calculated if McCabe Data is licensed and -DATA is specified	1.00	0	1	Arbitrary threshold of 1.0
hal_difficulty	Halstead Difficulty		Only calculated if -HALSTEAD is specified	30.00	0	Infinity	
hal_effort	Halstead Effort		Only calculated if -HALSTEAD is specified	300.00	0	Infinity	
hal_error_est	Halstead Error Estimate		Only calculated if -HALSTEAD is specified	0.60	0	Infinity	
hal_intel	Halstead Programmer Intelligence		Only calculated if -HALSTEAD is specified	120.00	0	Infinity	
hal_length	Halstead Length		Only calculated if -HALSTEAD is specified	300.00	0	Infinity	
hal level	Halstead Level		Only calculated if -HALSTEAD is specified	0.60	0	Infinity	
hal_prog_time	Halstead Programming Time		Only calculated if -HALSTEAD is specified	2100.00	0	Infinity	
hal_volume	Halstead Volume		Only calculated if -HALSTEAD is specified	1500.00	0	Infinity	
in_dataset	Is Module in Dataset (truth value)		Only calculated if McCabe Data is licensed and -DATA is specified	0.50	0	1	in_dataset is a truth value (0 or 1) - therefore 0.5 is the threshold
in_slice	Is Module in Slice (truth value)		Requires coverage results	0.50	0	1	in_slice is a truth value (0 or 1) - therefore 0.5 is the threshold
ivg	Module Design Complexity	Number of paths including calls to other modules (+1)	Always calculated	7.00	1	v(G)	
lines_with_nodes	Lines of code with flowgraph nodes		Always calculated	30.00	1	Infinity	Equal to threshold for lines of executable code (code)
lines_with_nodes_cov	Lines of code with flowgraph nodes covered		Requires coverage results	30.00	0	lines_with_nodes	Equal to threshold for lines_with_nodes
maint_severity	Maintenance Severity	ev(G) / v(G)	Always calculated	1.00	0	1	
mc	Multiple condition count		Only calculated if -BOOL is specified	24.00	0	Infinity	Correlates to threshold for v(G) of 10 and threshold for decision_density of 3 (9 decisions * 3 conditions)
mcc	Multiple condition decisions tested		Only calculated if -BOOL is specified and boolean coverage is collected	24.00	0	Infinity	Equal to threshold for mc
mcd	Modified condition count		Only calculated if -BOOL is specified	9.00	0	Infinity	Correlates to threshold for v(G) of 10 - which would equal 9 decisions
mcdc	Modified condition decisions tested		Only calculated if -BOOL is specified and boolean coverage is collected	9.00	0	Infinity	Equal to threshold for mcd
mixed	Source code and comment lines of code		Only calculated if -HALSTEAD is specified	10.00	0	Infinity	Arbitrary threshold of 10
nl	Number of lines	Calculated as the end line minus the start line in the listing	Always calculated	60.00	0	Infinity	60 lines represents 1 printed page of listing- generally accepted to be a good length for readable code
nodes	Node count		Always calculated	100.00	1	Infinity	Arbitrary threshold of 100

Metric	Name / Description	Additional Description	Notes	Threshold	Min Value	Max Value	Reason For Threshold
normal_vg	Normalized cyclomatic complexity	v(G) / nl	Always calculated	0.28	0	Infinity	
operand_count	Number of operands		Only calculated if -HALSTEAD is specified	30.00	0	Infinity	
operator_count	Number of operators		Only calculated if -HALSTEAD is specified	30.00	0	Infinity	
params	Formal parameter count		Only calculated if -PARAM is specified	5.00	0	Infinity	
pct_branch_cov	Percent of branches tested		Requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pct_call_pair_cov	Percent of call pairs tested		Requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pct_com	Percent of comment lines		Always calculated	8.00	0	100	
pct_DR_cov	Percent Data References Covered	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	100.00	0	100	All percentage coverage thresholds are 100%
pct_DV_cov	Percent Data Paths Covered	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	100.00	0	100	All percentage coverage thresholds are 100%
pct_edge_cov	Percent of edges tested		Requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pct_ivg_cov	Percent of design paths tested		Requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pct_line_cov	Percent of lines tested		Requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pct_path_cov	Percent of (cyclomatic) paths tested		Requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pct_sdr_cov	Percent of specified data references on tested nodes	Uses the dataset currently specified in the Data Dictionary	Only calculated if McCabe Data is licensed and -DATA is specified - requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pct_sdv_cov	Percent of specified data paths tested	Uses the dataset currently specified in the Data Dictionary	Only calculated if McCabe Data is licensed and -DATA is specified - requires coverage results	100.00	0	100	All percentage coverage thresholds are 100%
pvg	Pathological complexity	Number of severely unstructured paths (jumps into executing loops etc.)	Always calculated	2.00	1	v(G)	pv(G) greater than 1 represents severely unstructured code
sdr	Number of specified data references in the module	Uses the dataset currently specified in the Data Dictionary	Only calculated if McCabe Data is licensed and -DATA is specified	100.00	0	Infinity	Arbitrary threshold of 100
sdv	Specified data complexity	Uses the dataset currently specified in the Data Dictionary	Only calculated if McCabe Data is licensed and -DATA is specified	7.00	1	v(G)	
TDR	Tested Data References	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	18.00	0	Infinity	
TDV	Tested Data Paths	Uses the dataset currently specified in the DVM	Only calculated if -DATA is specified and Y2K is licensed	7.00	0	v(G)	
tested_branch	Tested Branches count		Requires coverage results	19.00	0	branch	Equal to threshold for branches
tested_edges	Tested Edges count		Requires coverage results	100.00	0	edges	Arbitrary threshold of 100
tested ivg	Tested Design Paths		Requires coverage results	7.00	0	iv(G)	Equal to threshold for ivg
tested_sdr	Tested Specified Data References	Uses the dataset currently specified in the Data Dictionary - counts the number of references located on executed lines with nodes	Only calculated if McCabe Data is licensed and -DATA is specified	100.00	0	sdr	Arbitrary threshold of 100
tested_sdv	Tested Specified Data Paths	Uses the dataset currently specified in the Data Dictionary	Only calculated if McCabe Data is licensed and -DATA is specified	100.00	0	sdv(G)	Arbitrary threshold of 100
unique_operands	Unique operands		Only calculated if -HALSTEAD is specified	20.00	0	Infinity	

Metric	Name / Description	Additional Description	Notes	Threshold	Min Value	Max Value	Reason For Threshold
unique_operators	Unique operators		Only calculated if -HALSTEAD is specified	20.00	0	Infinity	
untested_branch	Untested branches		Requires coverage results	0.00	0	branch	All untested thresholds are 0
untested_edge	Untested edges		Requires coverage results	0.00	0	edges	All untested thresholds are 0
untested_iv	Untested design paths		Requires coverage results	0.00	0	iv(G)	All untested thresholds are 0
untested_lines	Untested lines		Requires coverage results	0.00	0	lines	All untested thresholds are 0
untested_path	Untested test (cyclomatic) paths		Requires coverage results	0.00	0	v(G)	All untested thresholds are 0
vg	Cyclomatic Complexity		Always calculated	10.00	1	Infinity	See NIST Publication "Structured Testing" Section 2.5
OO Metrics							
avg_vg	Cyclomatic Complexity			10.00	0	Infinity	See NIST Publication "Structured Testing" Section 2.5
cbo	Coupling Between Objects	Count of number of references to classes outside the current class hierarchy		2.00	0	Infinity	
depth	Depth (the level for a class)			7.00	1	Infinity	
locm	Lack of Cohesion of Methods	Relates to the uniform use of data by all methods - high LOCM indicates data used non-uniformly		75.00	0	100	
max_evg	Class Maximum Essential complexity			4.00	1	Infinity	
max_vg	Class Maximum Cyclomatic Complexity			10.00	1	100	See NIST Publication "Structured Testing" Section 2.5
noc	Number of Children			3.00	0	Infinity	
oofanin	Number of Parents			1.00	0	Infinity	Threshold set to show classes which have any multiple inheritence (a complex and dubious thing to allow in classes)
pub_access	Access to Public Data	Total number of references to public/protected data across the project		0.00	0	Infinity	Public data should be avoided in an OO model - threshold is therefore 0
pub_data	Percent Public Data	Percentage of public/protected data elements		0.00	0	100	Public data should be avoided in an OO model - threshold is therefore 0
rfc	Response for Class	Total number of methods available including from inheritence		100.00	0	Infinity	
sum vg	Sum of Cyclomatic Complexity			70.00	1	Infinity	
wmc	Weighted Methods per Class	Number of locally implemeted methods available		14.00	0	Infinity	
Optional Additional Metrics							
MOD_UNSTRUCTURE	Count of unstructured decisions	Ignores the effects of early returns, breaks and compound (conditionally evaluated) logic.	Only calculated if METRICS_LEVEL >= 4	User defined	0	v(G)	

Metric	Name / Description	Additional Description	Notes	Threshold	Min Value	Max Value	Reason For Threshold
MAX_NESTING	Maximum nesting level	Includes the limitation that return statements cause all following constructs to be nested an extra level	Only calculated if METRICS_LEVEL >= 4	User defined	0	999.00	
MAX_NESTING_NORETS	Maximum nesting level	Ignores the effect of return statements	Only calculated if METRICS_LEVEL >= 4	User defined	0	999.00	
NUM_RETURNS	Number of early returns		Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
NUM_NESTEDRETURNS	Number of nested early returns	Early returns encountered at a nesting level greater than 1	Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
NUM_LOOPS	Number of loops		Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
NUM_IFS	Number of if-like statements	Compound logic using conditionally evaluated expressions does not add to this value	Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
NUM_SWITCHES	Number of switch-like statements	Number of decisions with more than 2 outcomes	Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
MAX_LOOP_NESTING	Maximum level of loop nesting	Counts loops within loops	Only calculated if METRICS_LEVEL >= 4	User defined	0	999.00	
MAX_SWITCH_NESTING	Maximum level of switch nesting	Counts switches within switches	Only calculated if METRICS_LEVEL >= 4	User defined	0	999.00	
MAX_SWITCH_CASES	Maximum number of switch outcomes		Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
NUM_SWITCH_CASES	Total number of switch outcomes		Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
NUM_COMPOUND_DECS	Number of if-like decisions which use compound logic	Count of expressions using && or || in C/C++/Java and And_then or Or_else in Ada - only has non-zero value if –SUPPRESS is NOT used during parsing and analysing C/C++/Java/Ada	Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
MAX_PREDICATES	Maximum number of predicates in compound decisions	Only has non-zero value if –SUPPRESS is NOT used during parsing and analysing C/C++/Java/Ada	Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
NUM_CALLS	Total number of calls to other modules (including library modules)		Only calculated if METRICS_LEVEL >= 5	User defined	0	Infinity	
NUM_CALLS_NOLIBS	Total number of calls to other modules (excluding library modules)		Only calculated if METRICS_LEVEL >= 5	User defined	0	Infinity	
FANOUT	Number of unique calls to other modules (including library modules)		Only calculated if METRICS_LEVEL >= 5	User defined	0	Infinity	
FANOUT_NOLIBS	Number of unique calls to other modules (excluding library modules)		Only calculated if METRICS_LEVEL >= 5	User defined	0	Infinity	
FANIN	Number of other modules calling this module		Only calculated if METRICS_LEVEL >= 5	User defined	0	Infinity	
TOTAL_CALLS_TO	Total number of times this module is called by other modules		Only calculated if METRICS_LEVEL >= 5	User defined	0	Infinity	
NUM_EXCEPTIONS	Number of exceptions encountered	catch statements in Java & C++, On Error statements in VB	Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	

Metric	Name / Description	Additional Description	Notes	Threshold	Min Value	Max Value	Reason For Threshold
NUM_EXCEPTBRANCHES	Number of branches involved in exception code		Only calculated if METRICS_LEVEL >= 4	User defined	0	Infinity	
COBOL_DEAD	Set to 1 if the module ends with the string "_dead"	Only useful for COBOL analyses.	Only calculated if METRICS_LEVEL >= 4	User defined	0	1.00	
COBOL_SPLIT	Set to 1 if the module ends with the string "_split"	Only useful for COBOL analyses.	Only calculated if METRICS_LEVEL >= 4	User defined	0	1.00	