

CATEGORY		CLASSWIZ Models				Natural Textbook Display Models					
Model		fx-82EX	fx-350EX	fx-570EX	fx-991EX	fx-82ES PLUS	fx-85ES PLUS	fx-350ES PLUS	fx-95ES PLUS	fx-570ES PLUS	fx-991ES PLUS
Specifications	Number of functions	274	274	552	552	252	252	252	274	417	417
	Power supply (Main)	AAA × 1 (R03)	AAA × 1 (LR03)	AAA × 1 (R03)	Solar & Battery (Solar + LR44 × 1)	AAA × 1 (R03)	Solar & Battery (Solar + LR44 × 1)	AAA × 1 (LR03)	AAA × 1 (R03)	AAA × 1 (R03)	Solar & Battery (Solar + LR44 × 1)
	Approximate battery life Main (hours)	2 years*1	1 year*1	2 years*1	2 years (LR44)*1	17,000*2	3 years (LR44)*1	8,700*3	17,000*2	17,000*2	3 years (LR44)*1
	Dimensions H×W×D (mm)	13.8 × 77 × 165.5	13.8 × 77 × 165.5	13.8 × 77 × 165.5	11.1 × 77 × 165.5	13.8 × 80 × 162	11.1 × 80 × 162	13.8 × 80 × 162	13.8 × 80 × 162	13.8 × 80 × 162	11.1 × 80 × 162
	Approximate weight (g)	100	100	100	90	100	95	100	100	100	95
	Case style	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard
	Display	63 × 192 dots	63 × 192 dots	63 × 192 dots	63 × 192 dots	31 × 96 dots	31 × 96 dots	31 × 96 dots	31 × 96 dots	31 × 96 dots	31 × 96 dots
	Display capacity (characters)	17 / 32	17 / 32	17 / 32	17 / 32	16	16	16	16	16	16
	Mantissa + exponent digits	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2
	Icon menus	●	●	●	●	—	—	—	—	—	—
	Internal operation digits	15	15	15	15	15	15	15	15	15	15
Nested parentheses levels	24	24	24	24	24	24	24	24	24	24	
Programming Functions	Program logic	—	—	—	—	—	—	—	—	—	—
	Memory (bytes)	—	—	—	—	—	—	—	—	—	—
	Program areas	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)
	Storage memory area (Flash memory)	—	—	—	—	—	—	—	—	—	—
Utilities	Built-in formulas	—	—	—	—	—	—	—	—	—	—
	Natural Textbook Display	●	●	●	●	●	●	●	●	●	●
	Key rollover function	●	●	●	●	●	●	●	●	●	●
	Replay function	●	●	●	●	●	●	●	●	●	●
	Multi-replay functions	●	●	●	●	●	●	●	●	●	●
	Backspace	●	●	●	●	●	●	●	●	●	●
	CALC function	—	—	●	●	—	—	—	—	●	●
	SOLVE function	—	—	●	●	—	—	—	—	●	●
	ANSWER function	●	●	●	●	●	●	●	●	●	●
	Variables	9	9	9	9	9	9	9	9	9	9
	Auto power off	●	●	●	●	●	●	●	●	●	●
Special Features	Base- <i>n</i> calculations (Binary/Octal/Hexadecimal)	—	—	●	●	—	—	—	—	●	●
	Logical operations	—	—	●	●	—	—	—	—	●	●
	Engineering symbol calculations	—	—	●	●	—	—	—	—	—	—
	Engineering notation (ENG/ENG)	●	●	●	●	●	●	●	●	●	●
	Scientific constants	—	—	47	47	—	—	—	—	40	40
Basic Functions	Metric conversions	—	—	40	40	—	—	—	—	40	40
	Trigonometric, inverse trigonometric (sin/cos/tan/sin ⁻¹ /cos ⁻¹ /tan ⁻¹)	●	●	●	●	●	●	●	●	●	●
	Hyperbolic, inverse hyperbolic (sinh/cosh/tanh/sinh ⁻¹ /cosh ⁻¹ /tanh ⁻¹)	●	●	●	●	●	●	●	●	●	●
	Exponential, logarithmic (log, ln, 10 ^x , e ^x)	●	●	●	●	●	●	●	●	●	●
	Base specified logarithmic	●	●	●	●	●	●	●	●	●	●
	Power and radical root (x ^x /x [√])	●	●	●	●	●	●	●	●	●	●
	Fraction	●	●	●	●	●	●	●	●	●	●
	Percentage calculation (%)	●	●	●	●	●	●	●	●	●	●
	Rounding	●	●	●	●	●	●	●	●	●	●
	Sexagesimal <-> decimal	●	●	●	●	●	●	●	●	●	●
	Display format (FIX, SCI)	●	●	●	●	●	●	●	●	●	●
	Angle unit (Deg, Rad, Grad)	●	●	●	●	●	●	●	●	●	●
	Angle unit conversion (Deg, Rad, Grad)	●	●	●	●	●	●	●	●	●	●
	Factorization into prime factors	●	●	●	●	●	●	●	●	—	—
	Ratio calculation	—	—	●	●	—	—	—	—	—	—
Calculus	Differential calculation	—	—	●	●	—	—	—	—	●	●
	Integration calculation	—	—	●	●	—	—	—	—	●	●
Algebra	Simultaneous equation	—	—	● (4 unknowns)	● (4 unknowns)	—	—	—	● (3 unknowns)	● (3 unknowns)	● (3 unknowns)
	Polynomial equation	—	—	● (Degree 2, 3, 4)	● (Degree 2, 3, 4)	—	—	—	● (Degree 2, 3)	● (Degree 2, 3)	● (Degree 2, 3)
	Inequality calculation	—	—	●	●	—	—	—	●	—	—
	Table function	●	●	●	●	●	●	●	●	●	●
Geometry	Matrix calculations	—	—	●	●	—	—	—	—	●	●
	Complex number calculation	—	—	●	●	—	—	—	—	●	●
	Coordinate conversion (Pol, Rec)	●	●	●	●	●	●	●	●	●	●
Probability	Vector calculations	—	—	●	●	—	—	—	—	●	●
	Combination, permutation (nCr , nPr)	●	●	●	●	●	●	●	●	●	●
Statistics	Random numbers	●	●	●	●	●	●	●	●	●	●
	Random integers	●	●	●	●	●	●	●	●	●	●
	List-based STAT data editor	●	●	●	●	●	●	●	●	●	●
	Standard deviation	●	●	●	●	●	●	●	●	●	●
	Regression analysis	●	●	●	●	●	●	●	●	●	●
	Linear regression	●	●	●	●	●	●	●	●	●	●
	ab exponential regression	●	●	●	●	●	●	●	●	●	●
Advanced statistical distribution calculations	—	—	●	●	—	—	—	—	—	—	
Spreadsheet	Other regressions	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad
	Spreadsheet	—	—	●	●	—	—	—	—	—	—
Others	Others	—	—	QR Code	QR Code	—	—	—	—	—	

*1 1 hour use per day *2 Continuous display of flashing cursor *3 Continuous operation (assuming 5 minutes calculation and 55 minutes display per hour)

CATEGORY		Standard Models						Graphing Models					Programmable Models					
Model		fx-82MS 2nd edition	fx-85MS 2nd edition	fx-350MS 2nd edition	fx-95MS 2nd edition	fx-991MS 2nd edition	fx-570MS 2nd edition	fx-100MS 2nd edition	fx-CG50	fx-9860GII SD	fx-9860GII	fx-9750GII	fx-7400GII	ClassPad II fx-CP400	fx-5800P	fx-50F II fx-50FH II	fx-3650P II	
Specifications	Number of functions	240	240	240	244	401	401	300	(Over 2,900)*2	(Over 2,900)*2	(Over 2,900)*2	(Over 2,800)	(Over 2,100)	—	664	406	308	
	Power supply (Main)	AAA × 1 (R03)	Solar & Battery (Solar + LR44 × 1)	LR44 × 1	AAA × 1 (R03)	Solar & Battery (Solar + LR44 × 1)	AAA × 1 (R03)	AAA × 1 (R03)	AAA × 4 (Rechargeable battery support)	AAA × 4	AAA × 4	AAA × 4	AAA × 4	AAA × 4 (Rechargeable battery support)	AAA × 1 (LR03)	Solar & Battery (Solar + LR44 × 1)	Solar & Battery (Solar + LR44 × 1)	
	Approximate battery life Main (hours)	2 years*1	3 years (LR44)*1	3 years*1	2 years*1	3 years (LR44)*1	2 years*1	2 years*1	170 (LR03)*3 100 (Rechargeable battery)*3	200 (LR03)*4	200 (LR03)*4	230 (LR03)*4	230 (LR03)*4	100 (LR03)*4 60 (Rechargeable battery)*4	1 year*1	3 years (LR44)*1	3 years (LR44)*1	
	Dimensions H×W×D (mm)	13.8 × 77 × 161.5	11.1 × 77 × 161.5	11.1 × 77 × 161.5	13.8 × 77 × 161.5	11.1 × 77 × 161.5	13.8 × 77 × 161.5	13.8 × 77 × 161.5	18.6 × 89 × 188.5	21.2 × 91.5 × 184	21.2 × 91.5 × 184	21.3 × 87.5 × 180.5	21.3 × 87.5 × 180.5	21.1 × 89 × 206	15.1 × 81.5 × 163	11.1 × 80 × 162	11.1 × 80 × 162	
	Approximate weight (g)	105	95	95	105	95	105	105	230	225	220	205	205	315	150	95	95	
	Case style	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Slide-on hard	Integrated hard	Slide-on hard	Slide-on hard	
	Display	12 characters and 10 + 2 digits	12 characters and 10 + 2 digits	12 characters and 10 + 2 digits	12 characters and 10 + 2 digits	12 characters and 10 + 2 digits	12 characters and 10 + 2 digits	12 characters and 10 + 2 digits	216 × 384 dots/ color	64 × 128 dots/ monochrome	64 × 128 dots/ monochrome	64 × 128 dots/ monochrome	64 × 128 dots/ monochrome	64 × 128 dots/ color	31 × 96 dots	5 × 7 dots × 16 digits	5 × 7 dots × 16 digits	
	Display capacity (characters)	12	12	12	12	12	12	12	21 × 8	21 × 8	21 × 8	21 × 8	21 × 8	25 × 15	16	16	16	
	Mantissa + exponent digits	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 3	10 + 2	10 + 2	10 + 2	
	Icon menus	—	—	—	—	—	—	—	●	●	●	●	●	●	—	—	—	
Programming Functions	Internal operation digits	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
	Nested parentheses levels	24	24	24	24	24	24	24	26	26	26	26	26	Up to memory	26	24	24	
	Program logic	—	—	—	—	—	—	—	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	● (BASIC-like)	
	Memory (bytes)	—	—	—	—	—	—	—	61,000	62,000	62,000	62,000	20,000	515,000	28,500	680	390	
	Program areas	—	—	—	—	—	—	—	Up to memory	Up to memory	Up to memory	Up to memory	Up to memory	Up to memory	Up to memory	4	4	
	Storage memory area (Flash memory)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	(Non programmable)	16MB	1.5MB	1.5MB	—	—	5.5MB Flash ROM for eActivity, 24MB USB Flash Drive	—	—	—	
	Built-in formulas	—	—	—	—	—	—	—	—	—	—	—	—	—	128	23	—	
	Python	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Utilities	Natural Textbook Display	—	—	—	—	—	—	—	●	●	●	—	—	●	●	●	
		Key rollover function	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Replay function		●	●	●	●	●	●	●	●	●	●	●	●	(History)	●	●	●	
Multi-replay functions		●	●	●	●	●	●	●	●	●	●	●	●	(History)	●	●	●	
Replay copy		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Backspace		●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	
CALC function		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
SOLVE function		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Answer function		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Variables		9	9	9	9	9	9	9	28	28	28	28	28	Up to memory	26–2398	7	7	
Special Features	Auto power off	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Base- <i>n</i> calculations (Binary/Octal/Hexadecimal)	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●	●	
	Logical operations	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●	●	
	Engineering symbol calculations	—	—	—	—	—	—	—	●	●	●	●	●	—	●	—	—	
	Engineering notation (ENG/ENG)	●	●	●	●	●	●	●	●	●	●	●	●	—	●	●	●	
	Scientific constants	—	—	—	—	40	40	—	—	—	—	—	—	—	40	40	—	
	Metric conversions	—	—	—	—	40	40	—	—	—	—	—	—	—	—	—	—	
	Computer Algebra System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Basic Functions	Trigonometric, inverse trigonometric (sin/cos/tan/sin ⁻¹ /cos ⁻¹ /tan ⁻¹)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		Hyperbolic, inverse hyperbolic (sinh/cosh/tanh/sinh ⁻¹ /cosh ⁻¹ /tanh ⁻¹)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Exponential, logarithmic (log, ln, 10 ^x , e ^x)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Base specified logarithmic		—	—	—	—	—	—	—	●	●	●	●	●	●	●	●	●	
Power and radical root (x ^y /x [√])		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Fraction		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Percentage calculation (%)		●	●	●	●	●	●	●	—	—	—	—	—	●	●	●	●	
Rounding		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Simplification		—	—	—	—	—	—	—	●	●	●	●	●	—	—	—	—	
Integer division		—	—	—	—	—	—	—	●	●	●	●	●	—	—	—	—	
Calculus	GCD/LCM	—	—	—	—	—	—	—	●	●	●	●	●	—	—	—	—	
	Sexagesimal ↔ decimal	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Display format (FIX, SCI)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Angle unit (Deg, Rad, Grad)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Angle unit conversion (Deg, Rad, Grad)	●	●	●	●	●	●	●	●	●	●	●	●	● / ● / —	●	●	●	
	Factorization into prime factors	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Differential calculation	—	—	—	—	●	●	●	●	●	●	●	●	●	●	—	●	
	Integration calculation	—	—	—	—	●	●	●	●	●	●	●	●	●	●	—	●	
	Algebra	Simultaneous equation	—	—	—	● (3 unknowns)	● (3 unknowns)	● (3 unknowns)	● (3 unknowns)	● (6 unknowns)	● (6 unknowns)	● (6 unknowns)	● (6 unknowns)	● (6 unknowns)	●	● (5 unknowns)	—	—
		Polynomial equation	—	—	—	● (Degree 2, 3)	● (Degree 2, 3)	● (Degree 2, 3)	● (Degree 2, 3)	● (Degree 2-6)	● (Degree 2-6)	● (Degree 2-6)	● (Degree 2-6)	● (Degree 2-6)	●	● (Degree 2, 3)	—	—
Inequality calculation		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Table function		—	—	—	—	—	—	—	●	●	●	●	●	●	—	—	—	
Matrix calculations		—	—	—	—	—	—	—	●	●	●	●	●	●	● (Max 10×10)	—	—	
Geometry	Complex number calculation	—	—	—	—	●	●	●	●	●	●	●	●	●	●	●	●	
	Geometry application	—	—	—	—	—	—	—	● (Preloaded)	● (Preloaded)	● (Preloaded)	—	—	●	—	—		
	Coordinate conversion (Pol, Rec)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Probability	Vector calculations	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—		
	Combination, permutation (nC_r , nP_r)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Statistics	Random numbers	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Random integers	—	—	—	—	—	—	—	●	●	●	●	●	—	—	—	—	
	List-based STAT data editor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Standard deviation	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Regression analysis	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Linear regression	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	ab exponential regression	—	—	—	—	—	—	—	●	●	●	●	●	●	—	—	—	
Finance	Advanced statistical distribution calculations	—	—	—	—	—	—	—	●	●	●	●	●	●	—	—	—	
	Other regressions	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Med, Quad, Cubic, Quart, Log, Exp, Pwr, Sin, Lgst	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	Log, Exp, Pwr, Inv, Quad	
Spreadsheet	Financial functions	—	—	—	—	—	—	—	●	●	●	●	●	—	—	—	—	
	Spreadsheet	—	—	—	—	—	—	—	●	●	●	●	●	—	—	—	—	
Others	eActivity	—	—	—	—	—	—	—	●	●	●	●	●	—	—	—	—	
	Data communication	—	—	—	—	—	—	—	●	●	●	●	●	●	—	—	—	
Others	Others	—	—	—	—	—	—	—	3D Graph, Recursions, Graphical color display, Color Link, Picture Plot	Recursions, Backlight display	Recursions, Backlight display	Recursions	—	Picture Plot, 3D Graph, Horizontal screen view, DiffEq Graph, DPJ direct connection, Mass storage, Screen Receiver	Recursions	—	—	

*1 1 hour use per day *2 Changes when OS is updated

*3 Repeat of following three-step cycle each hour. (1) Menu display for 5 minutes (2) Run-Matrix mode calculation for 5 minutes (3) Flashing cursor in Run-Matrix mode for 50 minutes. ** Continuous operation (assuming 5 minutes calculation and 55 minutes display per hour)