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Tables F calculations use: Initial = ours, new = arm's

Version	Vars	16	64	256	1024
Self made Arithmetic	Actual Time (seconds)	0.005976379	0.169753315	10.249694179	703.625758441
	Expected Time (seconds)	0.002933336 0433604	0.143215332 326284	10.191709219 1095548	703.367762355 1775888
	% Difference	103.740004 952	18.5301267 976	0.56894244 7668	0.036680112 4007
ARM Included Arithmetic	Actual Time (seconds)	0.008700837	0.030901187	0.598513828	34.471467612
	Expected Time(seconds)	0.001095752 6315789	0.007516381 1684628	0.5705214726 5429	34.3806505760 760761
	% Difference	694.051207 293	311.117881 164	4.90645079 763	0.264151592 254
Amdahl's Law Speedup	Speedup (F)	0.859120963 2560489	0.949939569 9242911	0.8929716706 289044	0.86983829856 32393

Calculations:

$$Performance_{expected} = \frac{instructions}{\frac{instructions}{cycle} (clock frequency)}$$

Clock frequency = from .760GHz to 1.999 GHz

$$Amdahl's Law: Speedup = \frac{initial\ value}{new\ value} = \frac{1}{1-F + \frac{F}{E=100}} =>$$

$$\frac{\text{initial value}}{\text{new value}} (1 - F + \frac{F}{E = 100}) = 1 \Rightarrow (1 - F + \frac{F}{E = 100}) = \frac{\text{new value}}{\text{initial value}}$$

$$\Rightarrow -\frac{100F}{100} + \frac{F}{100} = \frac{\text{new value}}{\text{initial value}} - 1 \Rightarrow F = -\frac{(\frac{\text{new value}}{\text{initial value}} - 1) * 100}{99}$$

$$\% \text{ difference} = (1 - \text{Actual time} / \text{Expected time}) * 100$$