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Table 1: % Differences Between Actual Time (s) and Expected Time (s) of Our Two Implementations

		16	64	256	1024
Lab3 Version	Actual Time (s)	0.044349406	2.748682022	175.8346953	11225.89839
	Expected Time (s)	0.042303061	2.753635542	176.1824976	11247.75203
	% Difference	4.72311%	0.180052%	0.197605%	0.194482%
ARM Version w/ mul instructions	Actual Time (s)	0.005185703	0.015742938	0.619380088	36.623379335
	Expected Time (s)	0.0012380179	0.008026647 1	0.6021001746	36.18418874
	% Difference	318.871407%	96.133426%	2.8699399%	1.2137638%

## **Example Calculation:**

$$T_{run} = \frac{I}{(IPC*CFREQ)} = \frac{108672757}{1.31*1.961E9} = 0.042303061$$

## Amdahl's Law Calculation:

$$\frac{11225.89839}{36.623379335} = \frac{1}{1 - F + \frac{F}{100}}$$

$$1 - F + \frac{F}{100} = \frac{1}{306.5227348}$$

$$- 0.99F = -0.9967375992$$

$$F = 1.006805656$$