

P3

Image Size	T _s (seconds)	T _p (seconds)			
		1	2	4	8
512	53.844	57.927	27.324	14.962	8.133
1024	199.996	201.249	101.154	51.145	29.05
2048	713.709	732.361	410.42	191.209	98.708

	Image Size	Speed-up			
# of Processors		1	2	4	8
	512	0.929514734	1.970575318	3.598716749	6.620435264
	1024	0.993773882	1.977143761	3.91037247	6.88454389
	2048	0.974531686	1.738972272	3.732611959	7.230508165

	Image Size	Efficiency			
# of Processors		1	2	4	8
	512	0.929514734	0.985287659	0.899679187	0.827554408
	1024	0.993773882	0.98857188	0.977593118	0.860567986
	2048	0.974531686	0.869486136	0.93315299	0.903813521

With a few exceptions, the efficiency *does* seem to increase when the image size increases. The effect is most drastic when P (# of processes used) is greater. This is because as the problem size (N) is increased (which is the size of the image in this case) efficiency starts to increase with the P. When N is held constant but you increase the number of processes used, efficiency declines. However, if you increase N as P increases, the efficiency does not decline as fast, and in certain cases, it increases or at least stays constant.