CMPS 270- Assignment 5

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Result Count

	1K x 1	1K x 2	1K x 4	1K x 32	1M x 1	1M x 2	1M x 4	1M x 32	1G x 1	1G x 2	1G x 4	1G x 32
Race	**180**	179.59	179.97	177.98	**199443**	142187.1	80356.86	55812.91	**199990225**	144674210.6	79882666.67	16663150.23
Private	**199**	199	199	197	**199948**	199948	199948	199948	**199995959**	199995959	199995959	199995959
Mutex	**190**	190	190	189	**199540**	199540	199540	199540	**200023697**	200023697	200023697	200023697
Cache	**192**	192	192	189	**199832**	199832	199832	199832	**199999936**	199999936	199999936	199999936

Time (Ticks) Result

	1K x 1	1K x 2	1K x 4	1K x 32	1M x 1	1M x 2	1M x 4	1M x 32	1G x 1	1G x 2	1G x 4	1G x 32
Race	101	73.07	85.83	724.28	40	220.2	247.33	1884.97	2679401	2570597	3081122	7747035.46
Private	26.82	46.77	113.62	1061.39	40.17	47.3	76.53	832.95	285966.3	300736.2	365376.2	834005.3
Mutex	80	76.2	105.8	854.8	57	20312.8	39904.8	188518.4	3692564	36169732	70327987	476608642
Cache	77	69.53	119.16	1454.83	45	51.24	94.76	1280.79	259233	305609.5	417351.7	953259.18

Race

1K x 1	1K x 2	1K x 4	1K x 32	1M x 1	1M x 2	1M x 4	1M x 32	1G x 1	1G x 2	1G x 4	1G x 32
100	99	99	0	100	0	0	0	100	0	0	0

Only when 1 thread, we get correct answer. This is due to interleaving.

Mutex

This had the correct count always but took a lot of time.

Private Counts

Not so different than race as for time but correct count result. Faster than mutex

Padded Cache

Correct results but speed equals to Private Count.