

Table 1 the coverage of 3, 4, 5 and 6-strength interactions of the 2-wise sub-covering arrays

Subject	3-wise			4-wise			5-wise			6-wise		
	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve
Flex	84.57%	86.17%	1.60%	61.25%	62.87%	1.62%	39.61%	40.48%	0.87%	24.20%	24.53%	0.32%
Grep(SIR)	80.22%	82.25%	2.03%	58.35%	60.95%	2.60%	40.80%	42.94%	2.14%	28.39%	29.79%	1.40%
Gzip	92.34%	92.53%	0.18%	80.97%	81.33%	0.36%	68.90%	69.32%	0.43%	57.59%	57.96%	0.37%
make	82.10%	83.79%	1.69%	51.45%	52.86%	1.42%	28.47%	29.11%	0.64%	15.07%	15.29%	0.22%
Sed	86.92%	88.95%	2.03%	72.19%	75.41%	3.22%	58.99%	62.38%	3.38%	47.98%	50.91%	2.93%
Findutils	64.20%	68.21%	4.01%	30.64%	33.28%	2.64%	12.31%	13.38%	1.07%	4.63%	5.01%	0.37%
Grep(CoRE)	73.10%	79.05%	5.94%	41.48%	46.97%	5.49%	20.63%	23.77%	3.14%	9.70%	11.25%	1.55%