

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

Subject	4-wise			5-wise			6-wise		
	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve
Flex	90.27%	92.17%	1.90%	71.43%	74.79%	3.36%	50.16%	52.99%	2.83%
Grep(SIR)	93.41%	93.79%	0.38%	82.10%	82.83%	0.73%	68.99%	69.79%	0.79%
Gzip	98.12%	98.66%	0.53%	94.04%	95.62%	1.58%	88.25%	91.14%	2.89%
make	83.50%	87.75%	4.25%	54.14%	59.49%	5.36%	30.70%	34.28%	3.58%
Sed	97.37%	97.26%	-0.11%	92.56%	92.29%	-0.28%	86.46%	86.02%	-0.44%
Findutils	73.44%	76.73%	3.29%	39.56%	42.18%	2.62%	17.40%	18.60%	1.20%
Grep(CoRE)	85.24%	87.88%	2.65%	56.98%	60.55%	3.57%	31.80%	34.32%	2.52%
Nanoxml	88.97%	89.34%	0.37%	71.69%	71.51%	-0.18%	53.47%	53.13%	-0.35%
Siena	87.00%	87.11%	0.11%	68.00%	67.91%	-0.09%	49.50%	49.07%	-0.43%