

Table 1: Computations on the  $\mathbb{B}$  dataset:  $p$ -values for FILO2<sup>x</sup> vs FILO2 on the left and FILO2<sup>x</sup> (long) vs FILO2 (long) on the right.

$p$ -values in bold are associated with rejected hypothesis when  $\bar{\alpha} = 0.002778$ .

The last column of each group contains a  $p$ -value interpretation. In particular, FILO2<sup>x</sup> is not statistically different from FILO2 when  $H_0$  cannot be rejected (Similar), FILO2<sup>x</sup> is statistically better when both  $H_0$  and  $H_1$  are rejected (Better), and, finally, FILO2<sup>x</sup> is statistically worse when  $H_0$  is rejected and  $H_1$  is not rejected (Worse).

Solvers	FILO2 <sup>x</sup> vs FILO2		FILO2 <sup>x</sup> (long) vs FILO2 (long)	
	$H_0$ / $H_1$	Outcome	$H_0$ / $H_1$	Outcome
2	0.375000 / 0.838867	Similar	0.695312 / 0.687500	Similar
3	0.556641 / 0.753906	Similar	0.695312 / 0.687500	Similar
4	0.492188 / 0.784180	Similar	0.556641 / 0.753906	Similar
5	0.845703 / 0.615234	Similar	0.625000 / 0.312500	Similar
6	0.232422 / 0.903320	Similar	0.921875 / 0.577148	Similar
7	0.695312 / 0.687500	Similar	0.322266 / 0.161133	Similar
8	0.695312 / 0.687500	Similar	1.000000 / 0.539062	Similar
9	0.083984 / 0.967773	Similar	0.625000 / 0.312500	Similar
10	0.375000 / 0.838867	Similar	0.769531 / 0.652344	Similar