

A random sample of 13 technology companies is chosen and the numbers of employees in 2018 and in 2022 are recorded.

Company	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>I</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>M</i>
Number in 2018	104	19	126	234	970	514	35	149	429	12	86	304	1104
Number in 2022	106	24	127	228	1012	525	32	156	449	24	78	294	1154

A researcher claims that there has been an increase in the median number of employees at technology companies between 2018 and 2022.

- (a)** Carry out a Wilcoxon matched-pairs signed-rank test, at the 5% significance level, to test whether the data supports this claim. [7]

The researcher notices that the figures for company *G* have been recorded incorrectly. In fact, the number of employees in 2018 was 32 and the number of employees in 2022 was 35.

- (b)** Explain, with numerical justification, whether or not the conclusion of the test in part **(a)** remains the same. [2]