

## Mathematics – Organisation, Forms and Methods of Teaching in Visited Basic and Secondary Schools

| Organisation, forms and methods of teaching  | Basic education   |      |                |      |                           |      | Secondary education            |      |      |      |            |      |      |      |      |      |      |      |
|--|---|------|----------------|------|---------------------------|------|--------------------------------|------|------|------|------------|------|------|------|------|------|------|------|
|  | BS – elem. lev.   |      | BS – 2nd level |      | SGSs 6 and 8 lower grades |      | SGS 4+SGS 6 and 8 upper grades |      | STS  |      | SVS+Lyceum |      |      |      |      |      |      |      |
|  | 746 *   |      | 451            |      | 160                       |      | 468                            |      | 209  |      | 71         |      |      |      |      |      |      |      |
|  | Frequency of evaluations of organisation, forms and methods of teaching using scale from one to three (%) |      |                |      |                           |      |                                |      |      |      |            |      |      |      |      |      |      |      |
|  | +3  | 2    | 1-             | +3   | 2                         | 1-   | +3                             | 2    | 1-   | +3   | 2          | 1-   | +3   | 2    | 1-   |      |      |      |
| Lecture, explanation – effectiveness, appropriateness  | 66.8  | 32.0 | 1.2            | 66.9 | 30.1                      | 3.0  | 56.8                           | 42.6 | 0.7  | 54.1 | 43.8       | 2.1  | 66.8 | 31.2 | 2.0  | 32.4 | 57.4 | 10.3 |
| Heuristic method – adequacy, appropriateness   | 63.5  | 35.3 | 1.2            | 57.0 | 37.6                      | 5.5  | 48.4                           | 50.8 | 0.8  | 45.3 | 52.3       | 2.3  | 60.8 | 34.8 | 4.4  | 30.4 | 54.3 | 15.2 |
| Experiments – analysis, explanation, object-teaching   | 64.2  | 33.3 | 2.4            | 55.5 | 36.8                      | 7.7  | 51.4                           | 47.1 | 1.4  | 39.2 | 58.0       | 2.8  | 57.6 | 40.2 | 2.2  | 20.0 | 63.3 | 16.7 |
| Switching methods during the lesson – their appropriateness  | 67.8  | 30.2 | 2.0            | 47.9 | 44.5                      | 7.7  | 36.6                           | 58.8 | 4.6  | 31.6 | 59.6       | 8.8  | 42.9 | 53.6 | 3.6  | 15.4 | 69.2 | 15.4 |
| Mathematical model – appropriateness   | 66.8  | 32.5 | 0.7            | 65.5 | 31.0                      | 3.5  | 51.8                           | 48.2 | 0.0  | 51.7 | 47.8       | 0.5  | 66.5 | 32.4 | 1.1  | 23.7 | 69.5 | 6.8  |
| Abstract imagination – development   | 58.6  | 39.4 | 2.0            | 61.5 | 34.9                      | 3.5  | 52.8                           | 44.4 | 2.8  | 52.6 | 44.0       | 3.4  | 59.7 | 38.8 | 1.5  | 26.2 | 50.8 | 23.1 |
| Logical thinking (analysis, synthesis, deduction, induction) – development                         | 59.5  | 38.8 | 1.7            | 63.0 | 34.9                      | 2.1  | 61.1                           | 38.3 | 0.7  | 60.6 | 37.8       | 1.6  | 69.3 | 29.2 | 1.5  | 31.9 | 56.5 | 11.6 |
| Critical thinking – development, active absorption of information                                  | 55.7  | 41.9 | 2.5            | 51.5 | 42.8                      | 5.7  | 43.1                           | 53.6 | 3.3  | 38.3 | 57.2       | 4.4  | 43.0 | 54.4 | 2.6  | 22.6 | 51.6 | 25.8 |
| Structure of knowledge – terms, context  | 64.3  | 34.7 | 1.0            | 65.4 | 31.8                      | 2.8  | 56.7                           | 43.3 | 0.0  | 55.1 | 43.8       | 1.2  | 67.6 | 32.4 | 0.0  | 29.4 | 60.3 | 10.3 |
| Assigned tasks support equal opportunities for education – they take into account skills of pupils | 75.9  | 23.1 | 1.0            | 71.5 | 27.1                      | 1.4  | 78.2                           | 21.1 | 0.7  | 72.9 | 26.6       | 0.5  | 70.1 | 29.3 | 0.5  | 51.9 | 48.1 | 0.0  |
| Work with texts – independent, popular literature, references, satisfying pupils' interest         | 52.3  | 44.3 | 3.4            | 36.1 | 52.8                      | 11.1 | 36.4                           | 57.1 | 6.5  | 24.9 | 65.5       | 9.6  | 39.6 | 56.3 | 4.2  | 11.1 | 66.7 | 22.2 |
| Work with ICT – independent, beneficial for development of pupils' personality                     | 66.7  | 25.0 | 8.3            | 58.5 | 18.5                      | 23.1 | 48.4                           | 29.0 | 22.6 | 44.9 | 30.4       | 24.6 | 52.6 | 36.8 | 10.5 | 33.3 | 66.7 | 0.0  |

\* Number of observed teaching lessons in all schools of the relevant level of education