# TIMSS SA Newsletter 

Human Sciences Research Council

## TIMSS 2019 South African Mathematics Item Diagnostic Reports

We are pleased to announce the publication of the TIMSS 2019 South African Item Diagnostic Report: Grade 5 Mathematics and the TIMSS 2019 South African Item Diagnostic Report: Grade 9 Mathematics.





At the end of each TIMSS cycle, a few items are released for research use. We analysed learner performance of each released mathematics item to understand the difficulties learners have and gaps in their knowledge. We also provided suggestions for remediation to improve the teaching and learning of mathematics in our classrooms.

## South African learners performed better on some items

GRADE 5 ITEM:
Which number has 7 in the hundreds place and 6 in the units place?
A. 167
B) 176
C) 716
D) 761

Percentages of learner responses

|  | A | B | C | D | Omitted |
| :--- | :---: | :---: | :---: | :---: | :---: |
| South Africa | 7 | 18 | $\mathbf{5 7}$ | 14 | 4 |
| International average ( $\mathrm{n}=11$ ) | 11 | 16 | $\mathbf{5 8}$ | 11 | 5 |

GRADE 9 ITEM:
Which is the value of $2(6 x-3 y)$ when $x=3$ and $y=2$ ?
A) 6
B) 12
C) 24
D) 30

Percentages of learner responses

|  | A | B | C | D | Omitted |
| :--- | :---: | :---: | :---: | :---: | :---: |
| South Africa | 31 | 22 | 36 | $\mathbf{9}$ | 2 |
| International average ( $\mathrm{n}=17$ ) | 16 | 23 | $\mathbf{5 2}$ | $\mathbf{7}$ | 2 |

## However, they performed poorly on others

## GRADE 5 ITEM

Maria travelled by bicycle for 4 days. She travelled the same distance each day. Altogether she travelled 76 kilometres. How many kilometres did Maria travel each day?
A. 18
B) 19
C) 20
D) 24

Percentages of learner responses

|  | A | B | C | D | Omitted |
| :--- | :---: | :---: | :---: | :---: | :---: |
| South Africa | 15 | 19 | 16 | 47 | 2 |
| International average ( $\mathrm{n}=11$ ) | 14 | $\mathbf{3 4}$ | 15 | 31 | 6 |

## GRADE 9 ITEM

Sophie recorded the temperature $\left({ }^{\circ} \mathrm{C}\right)$ at the same time each day for 5 days: $\mathbf{- 2 , 1 , 3 , 2 , 3}$ What is the mean of these 5 temperatures?

Answer: 1.4

Percentages of learner responses

|  | Correct | Incorrect | Omitted |
| :--- | :---: | :---: | :---: |
| South Africa | $\mathbf{3}$ | 89 | 8 |
| International average (n=17) | $\mathbf{2 3}$ | 64 | 13 |

## Interested in using TIMSS South Africa data for research?

If you are interested in working with us on publications based on the TIMSS data, please contact us.

