

## Appendix 10E: Modifications to the TIMSS 2019 Achievement Data

Grade 4 Mathematics	
<b>Items Deleted for All Countries</b>	
M02_10B – ME71217B, MP71217B	(severe differential item functioning)
M04_10A – ME71135A, MP71135A	(severe differential item functioning)
M08_09 – ME71199, M08_08 – MP71199	(severe differential item functioning)
M10_01 – ME71005, MP71005	(severe differential item functioning)
<b>Items Recoded for All Countries</b>	
M05_12 – ME51080, MP51080	(20 to 10, 10 to 71, 11 to 72)
M10_11 – ME71189, MP71189	(20 to 10, 10 to 79, 11 to 79)
M12_11 – ME71190, M12_10 – MP71190	(20 to 10, 10 to 70)
M13_02 – ME61254, MP61254	(20 to 10, 10 to 70)
M13_08 – ME61224, MP61224	(70 to 12)
M14_09 – ME71177, MP71177	(20 to 10, 10 to 70)
<b>Items Deleted by Country</b>	
<b>Chile</b>	
M05_12 – ME51080	(poor discrimination)
<b>Croatia</b>	
M12_03 – ME71062	(negative discrimination)
<b>Hungary</b>	
M12_03 – ME71062	(negative discrimination)
<b>Japan</b>	
M08_12 – MP71194	(translation error)
M12_04B – MP71216B	(translation error)
M12_10 – MP71202	(translation error)
<b>Korea</b>	
M11_01 – ME61178, MP61178	(severe item-by-country interaction)
<b>Netherlands</b>	
M10_08 – ME71179	(derived item, poor discrimination)

Items beginning with “ME” are eTIMSS items. Items beginning with “MP” are paperTIMSS items, or bridge items. paperTIMSS trend items deleted or recoded for all countries were also modified for eTIMSS bridge samples.

## Grade 4 Mathematics – Less Difficult

### Items Deleted for All Countries

MP02\_10B – MP71217B (severe differential item functioning)

MP08\_08 – MP71199 (severe differential item functioning)

### Items Recoded for All Countries

MP13\_02 – MP61254 (20 to 10, 10 to 70)

MP13\_08 – MP61224 (70 to 12)

### Items Deleted by Country

#### Bosnia and Herzegovina (Cyrillic language only)

MP13\_03, MP61244 (translation error)

#### Morocco

MN11\_09 – MN11158 (poor reliability)

#### Saudi Arabia

MP13\_01 – MP61240 (derived item, translation error)

Items beginning with “MP” are items shared with the regular fourth grade mathematics assessment. Items beginning with “MN” are items unique to less difficult mathematics.

## Grade 4 Science

### Items Deleted for All Countries

S05_02 – SE51020, SP51020 (poor discrimination)
S06_05 – SE61166, SP61166 (poor discrimination)
S07_03C – SE51138C, SP51138C (poor discrimination)
S08_01 – SE71091, SP71091 (severe differential item functioning)
S10_11 – SP71921 (poor discrimination)
S12_09 – SE71910, SP71910 (severe differential item functioning)
S13_01 – SE61125, SP61125 (poor discrimination)
S14_03 – SE71021, SP71021 (severe differential item functioning)

### Items Recoded for All Countries

S12_01 – SE71031, SP71031 (11 to 70)
S13_02 – SE61014, SP61014 (20 to 10, 10 to 70)

### Items Deleted by Country

#### Azerbaijan (Azerbaijani language only)

S10\_06 – SP71080 (translation error)

#### Bosnia and Herzegovina (Serbian language only)

S04\_08 – SP71102 (translation error)

#### Chile

S10\_11 – SE71921 (negative discrimination)

#### France

S07\_02 – SE51051 (negative discrimination)

#### Georgia

S13\_03 – SE61056 (poor discrimination)

#### Germany

S01\_03A – SE51132A, SP51132A (translation error)

#### Kosovo

S03\_03 – SP61054 (poor reliability)

S13\_02 – SP61014 (poor reliability)

#### Morocco

S03\_03 – SP61054 (poor reliability)

#### Netherlands

S01\_06 – SP51063 (negative discrimination)

#### Portugal

S10\_11 – SE71921 (negative discrimination)

#### Russian Federation

S07\_07 – SE51200 (severe item-by-country interaction)

#### Saudi Arabia

S11\_06 – SP61093 (poor reliability)

S13\_11 – SP61124 (derived item, poor discrimination)

Items beginning with “SE” are eTIMSS items. Items beginning with “SP” are paperTIMSS items, or bridge items. paperTIMSS trend items deleted or recoded for all countries were also modified for eTIMSS bridge samples.

## Grade 8 Mathematics

### Items Deleted for All Countries

M06\_07 – ME62342, MP62342 (poor discrimination)

M09\_12B – ME62345B, MP62345B (derived item, poor discrimination)

M10\_03 – ME72038, MP72038 (severe differential item functioning)

M12\_14B – ME72211B, MP72211B (severe differential item functioning)

M13\_12 – ME62048, MP62048 (derived item, poor discrimination)

### Items Recoded for All Countries

M03\_13 – ME62254, MP62254 (20 to 10)

M07\_08 – ME52087, MP52087 (20 to 10, 10 to 70)

M08\_09B – ME72128B, MP72128B (10 to 20, 70 to 10)

### Items Deleted by Country

#### Georgia

M02\_03 – ME72017 (poor discrimination)

M03\_06 – MP62351 (negative discrimination)

#### Kazakhstan (Kazakh language only)

M10\_15 – MP72206 (translation error)

M12\_09A – MP72110A (translation error)

M12\_09B – MP72110B (translation error)

M12\_12 – MP72229 (translation error)

#### Lebanon

M09\_07 – MP62350 (negative discrimination)

#### Saudi Arabia

M03\_02 – MP62139 (translation error)

M05\_12 – MP52502 (translation error)

Items beginning with “ME” are eTIMSS items. Items beginning with “MP” are paperTIMSS items, or bridge items. paperTIMSS trend items deleted or recoded for all countries were also modified for eTIMSS bridge samples.

## Grade 8 Science

### Items Deleted for All Countries

S01_06 – SE52134 (severe differential item functioning)
S03_12 – SE62272, SP62272 (poor discrimination)
S04_02 – SP72403 (severe differential item functioning)
S05_11 – SE52221, SP52221 (poor discrimination)
S08_09 – SE72133, SP72133 (severe differential item functioning)
S10_07 – SE72048, SP72048 (severe differential item functioning)
S11_12 – SE62036, SP62036 (attractive distracter)
S11_15C – SE62242C, SP62242C (poor discrimination)
S12_04 – SE72906, SP72906 (derived item, severe differential item functioning)
S12_15 – SE72329, SP72329 (severe differential item functioning)
S13_05 – SE62266, SP62266 (attractive distracter)

### Items Recoded for All Countries

S12_09 – SE72523, SP72523 (10 to 20, 11 to 10)
S12_13A – SE72280A, SP72280A (20 to 10, 10 to 70)

### Items Deleted by Country

#### England

S09\_03 – SE62106 (translation error)

#### Egypt

S10\_16 – SP72720 (negative discrimination)

#### Iran, Islamic Rep. of

S05\_05 – SP52248 (negative discrimination)

#### Japan

S10\_09 – SP72116 (translation error)

S14\_16 – SP72303 (translation error)

#### Jordan

S01\_06 – SP52134 (negative discrimination)

#### Morocco

S01\_06 – SP52134 (negative discrimination)

S10\_14 – SP72220 (negative discrimination)

#### Saudi Arabia

S02\_06 – SP72103 (printing error)

S03\_04 – SP62225 (item not administered)

S04\_08B – SP72141B (low reliability)

S06\_04A – SP62098A (low reliability)

#### South Africa, including Gauteng and Western Cape

S06\_05 – SP62032 (poor discrimination)

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