

Appendix

SELECTED PERFORMANCE ASSESSMENT
RESULTS FOR HONG KONG AND ISRAEL

Table B.1 Hong Kong: Average Percentage Scores on Items by Task* - Eighth Grade

Pulse Task	Overall Task Average ▼	Item 1 Measure Pulse		Item 2 Describe Trend	Item 3 Explain Results			
		Presentation	Data Quality					
	54 (3.3)	55 (6.0)	51 (5.7)	76 (4.1)	34 (3.8)			
Magnet Task	Overall Task Average ▼	Item 1 Identify Magnet	Item 2 Describe Strategy					
	88 (3.5)	94 (2.7)	82 (5.1)					
Batteries Task	Overall Task Average ▼	Item 1 Identify Good/Bad Batteries	Item 2 Describe Tests	Item 3 Identify Arrangement	Item 4 Explain Arrangement			
	64 (3.2)	75 (4.0)	51 (6.5)	96 (2.4)	34 (5.5)			
Rubber Band Task	Overall Task Average ▼	Item 1 Measure Lengths		Item 2 Graph Results	Item 3 Calculate Increase	Item 4 Describe Trend	Item 5 Predict Length	Item 6 Explain Prediction
		Presentation	Data Quality					
	63 (3.2)	76 (4.6)	88 (4.5)	63 (4.5)	55 (5.3)	59 (3.0)	51 (5.3)	48 (5.5)
Solutions Task	Overall Task Average ▼	Item 1 Plan Investigation	Item 2 Conduct Investigation		Item 3 Draw Conclusions	Item 4 Explain Conclusion	Item 5 Evaluate Design	
			Presentation	Data Quality				
	36 (3.4)	16 (3.6)	48 (5.9)	51 (6.1)	71 (6.2)	20 (3.7)	12 (4.4)	
Shadows Task	Overall Task Average ▼	Item 1 Describe Observation	Item 2 Explain Observation	Item 3 Problem Solve and Record Distances	Item 4 Describe Investigation	Item 5 Present Measurements	Item 6 Conclude and Generalize	
	27 (2.2)	56 (4.2)	35 (3.8)	27 (4.0)	23 (3.4)	12 (2.9)	10 (3.7)	

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

* Percent of total possible points on each item averaged over students.
 ▼Average of percentage scores across items; all items weighted equally.
 () Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Hong Kong: Average Percentage Scores on Items by Task* - Eighth Grade (Continued) **Table B.1**

Plasticine Task	Overall Task Average[▼]	Item 1A Weigh 20g Lump	Item 1B Describe Strategy 20g Lump	Item 2A Weigh 10g Lump	Item 2B Describe Strategy 10g Lump	Item 3A Weigh 15g Lump	Item 3B Describe Strategy 15g Lump	Item 4A Weigh 35g Lump	Item 4B Describe Strategy 35g Lump
	52 (3.7)	92 (2.9)	80 (4.8)	56 (6.0)	55 (5.5)	44 (5.8)	28 (7.9)	27 (5.2)	36 (6.1)

Dice Task	Overall Task Average[▼]	Item 1 Complete Table	Item 2 Describe Pattern	Item 3 Apply Algorithm	Item 4 Count Frequencies	Item 5A Identify Most Frequent Number	Item 5B Explain Findings
	77 (2.4)	93 (2.2)	73 (7.4)	94 (2.6)	70 (4.0)	84 (3.9)	48 (6.7)

Calculator Task	Overall Task Average[▼]	Item 1 Perform Calculations	Item 2 Identify Pattern	Item 3 Predict: Routine Application	Item 4 Predict: Non-Routine Application	Item 5 Explain Predictions	Item 6 Factors of 455	
							Reasons Factors Incorrect	Find Correct Factors
	55 (1.9)	98 (1.0)	38 (6.3)	90 (2.6)	65 (4.0)	35 (4.8)	37 (2.4)	19 (4.2)

Folding and Cutting Task	Overall Task Average[▼]	Item 1 Fold and Cut Shape 1	Item 2 Fold and Cut Shape 2	Item 3 Fold and Cut Shape 3	Item 4 Predict and Draw Shape 4
	76 (4.8)	77 (5.2)	80 (4.7)	78 (5.2)	70 (6.3)

Around the Bend Task	Overall Task Average[▼]	Item 1 Measure Models A and B	Item 2 Convert Using Scale	Item 3 Relate A and B to Real Furniture	Item 4 Solve Problem With A and B	Item 5 Six Models			Item 6 Find General Rule
						Draw Models to Scale	Relate Models to Real Furniture	Solve Problem with Models	
	56 (2.5)	87 (3.7)	72 (4.6)	61 (4.0)	71 (5.3)	46 (6.1)	42 (4.5)	60 (4.3)	9 (3.2)

Packaging Task	Overall Task Average[▼]	Item 1 Draw Boxes	Item 2 Draw Nets	Item 3 Construct Net to Scale
	54 (3.4)	53 (5.0)	55 (5.1)	53 (4.5)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

* Percent of total possible points on each item averaged over students.

▼Average of percentage scores across items; all items weighted equally.

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Table B.2 Israel: Average Percentage Scores on Items by Task* - Unweighted Data Eighth Grade

Pulse Task	Overall Task Average ▼	Item 1 Measure Pulse		Item 2 Describe Trend	Item 3 Explain Results			
		Presentation	Data Quality					
	62 (2.9)	67 (5.7)	43 (4.5)	84 (3.2)	55 (5.0)			
Magnet Task	Overall Task Average ▼	Item 1 Identify Magnet	Item 2 Describe Strategy					
	88 (3.6)	77 (6.5)	98 (1.9)					
Batteries Task	Overall Task Average ▼	Item 1 Identify Good/Bad Batteries	Item 2 Describe Tests	Item 3 Identify Arrangement	Item 4 Explain Arrangement			
	65 (4.2)	52 (10.1)	55 (7.3)	98 (1.8)	54 (3.3)			
Rubber Band Task	Overall Task Average ▼	Item 1 Measure Lengths		Item 2 Graph Results	Item 3 Calculate Increase	Item 4 Describe Trend	Item 5 Predict Length	Item 6 Explain Prediction
		Presentation	Data Quality					
	75 (2.7)	91 (3.2)	93 (2.7)	65 (9.2)	60 (6.4)	61 (3.7)	85 (5.5)	69 (3.9)
Solutions Task	Overall Task Average ▼	Item 1 Plan Investigation	Item 2 Conduct Investigation		Item 3 Draw Conclusions	Item 4 Explain Conclusion	Item 5 Evaluate Design	
			Presentation	Data Quality				
	64 (1.3)	56 (4.5)	77 (5.2)	61 (6.0)	91 (4.2)	57 (5.8)	40 (6.1)	
Shadows Task	Overall Task Average ▼	Item 1 Describe Observation	Item 2 Explain Observation	Item 3 Problem Solve and Record Distances	Item 4 Describe Investigation	Item 5 Present Measurements	Item 6 Conclude and Generalize	
	43 (3.8)	92 (2.8)	29 (6.0)	25 (3.3)	46 (7.8)	48 (8.4)	18 (5.3)	

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

* Percent of total possible points on each item averaged over students.
 ▼ Average of percentage scores across items; all items weighted equally.
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Israel: Average Percentage Scores on Items by Task* - Unweighted Data
Eighth Grade (Continued)

Table B.2

Plasticine Task	Overall Task Average [▼]	Item 1A Weigh 20g Lump	Item 1B Describe Strategy 20g Lump	Item 2A Weigh 10g Lump	Item 2B Describe Strategy 10g Lump	Item 3A Weigh 15g Lump	Item 3B Describe Strategy 15g Lump	Item 4A Weigh 35g Lump	Item 4B Describe Strategy 35g Lump
	78 (4.6)	98 (2.0)	91 (5.9)	96 (4.1)	61 (10.0)	91 (5.0)	51 (8.8)	79 (8.6)	53 (9.3)
Dice Task	Overall Task Average [▼]	Item 1 Complete Table	Item 2 Describe Pattern	Item 3 Apply Algorithm	Item 4 Count Frequencies	Item 5A Identify Most Frequent Number	Item 5B Explain Findings		
	74 (3.1)	87 (5.0)	58 (6.0)	91 (4.1)	71 (5.9)	80 (2.8)	56 (6.4)		
Calculator Task	Overall Task Average [▼]	Item 1 Perform Calculations	Item 2 Identify Pattern	Item 3 Predict: Routine Application	Item 4 Predict: Non-Routine Application	Item 5 Explain Predictions	Item 6 Factors of 455		
	63 (2.3)	98 (1.1)	46 (6.9)	83 (5.4)	64 (4.8)	41 (6.4)	Reasons Factors Incorrect	Find Correct Factors	67 (2.1) 39 (4.6)
Folding and Cutting Task	Overall Task Average [▼]	Item 1 Fold and Cut Shape 1	Item 2 Fold and Cut Shape 2	Item 3 Fold and Cut Shape 3	Item 4 Predict and Draw Shape 4				
	67 (5.5)	70 (6.2)	72 (6.6)	69 (5.1)	57 (5.8)				
Around the Bend Task	Overall Task Average [▼]	Item 1 Measure Models A and B	Item 2 Convert Using Scale	Item 3 Relate A and B to Real Furniture	Item 4 Solve Problem With A and B	Item 5 Six Models			Item 6 Find General Rule
	62 (2.1)	83 (5.3)	74 (7.6)	79 (4.0)	69 (5.8)	Draw Models to Scale	Relate Models to Real Furniture	Solve Problem with Models	48 (6.9) 67 (4.7) 60 (3.9) 14 (4.8)
Packaging Task	Overall Task Average [▼]	Item 1 Draw Boxes	Item 2 Draw Nets	Item 3 Construct Net to Scale					
	58 (5.4)	55 (5.4)	63 (6.6)	56 (9.1)					

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

* Percent of total possible points on each item averaged over students.

▼ Average of percentage scores across items; all items weighted equally.

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Table B.3 Israel: Average Percentage Scores on Items by Task* - Unweighted Data Fourth Grade

Pulse Task	Overall Task Average▼	Item 1 Measure Pulse at Rest	Item 2 Measure Pulse During Exercise	Item 3 Describe Trend	Item 4 Explain Results			
	54 (2.5)	72 (5.0)	64 (3.7)	57 (4.1)	22 (2.0)			
Magnet Task	Overall Task Average▼	Item 1 Identify Stronger Magnet	Item 2 Describe Strategy					
	93 (1.8)	93 (2.5)	94 (2.0)					
Batteries Task	Overall Task Average▼	Item 1 Identify Good/Bad Batteries	Item 2 Describe Tests	Item 3 Identify Arrangement	Item 4 Explain Arrangement			
	46 (2.3)	39 (4.3)	23 (3.1)	82 (3.8)	39 (2.3)			
Rubber Band Task	Overall Task Average▼	Item 1 Record Lengths	Item 2 Calculate Increase	Item 3 Describe Trend	Item 4 Predict Length	Item 5 Explain Prediction		
	61 (1.5)	95 (1.1)	48 (3.6)	57 (2.7)	62 (3.6)	43 (3.6)		
Containers Task	Overall Task Average▼	Item 1 Measure Temperatures and Record in Table		Item 2 Identify Best Insulator	Item 3 Explain Best Insulator	Item 4 Apply to Ice Cream	Item 5 Explain Application	
		Ability to Use Thermometer	Quality of Data Gathering					
40 (1.7)	87 (3.8)	72 (4.3)	39 (3.1)	11 (2.3)	23 (3.3)	5 (1.6)		
Shadows Task	Overall Task Average▼	Item 1 Describe Shadow: Closer	Item 2 Describe Shadow: Further	Item 3 Measure Shadow Width	Item 4 Measure Distance	Item 5 Record 3 More Measurements	Item 6 Explain Shadow Size	Item 7 Find General Rule
	35 (1.9)	74 (3.6)	77 (3.7)	26 (3.4)	27 (5.0)	20 (2.3)	12 (2.6)	7 (2.5)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

* Percent of total possible points on each item averaged over students.

▼Average of percentage scores across items; all items weighted equally.

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Israel: Average Percentage Scores on Items by Task* - Unweighted Data **Table B.3**
Fourth Grade (Continued)

Plasticine Task	Overall Task Average [▼]	Item 1A Weigh 20g Lump	Item 1B Describe Strategy 20g Lump	Item 2A Weigh 10g Lump	Item 2B Describe Strategy 10g Lump	Item 3A Weigh 30g Lump	Item 3B Describe Strategy 30g Lump	Item 4A Weigh 15g Lump	Item 4B Describe Strategy 15g Lump
	56 (3.8)	75 (5.8)	74 (4.2)	59 (6.4)	39 (3.8)	68 (6.1)	53 (5.3)	54 (4.8)	30 (4.7)

Dice Task	Overall Task Average [▼]	Item 1 Complete Table	Item 2 Describe Pattern	Item 3 Apply Algorithm	Item 4 Count Frequencies	Item 5A Identify Most Frequent Number	Item 5B Explain Findings
	58 (2.4)	73 (3.3)	48 (3.5)	88 (2.6)	55 (4.1)	60 (4.5)	25 (4.6)

Calculator Task	Overall Task Average [▼]	Item 1 Perform Calculations	Item 2 Identify Pattern	Item 3 Predict: Routine Application	Item 4 Predict: Non-Routine Application	Item 5 Explain Predictions
	48 (2.6)	96 (1.1)	27 (3.4)	56 (5.2)	37 (4.4)	21 (2.8)

Folding and Cutting Task	Overall Task Average [▼]	Item 1 Fold and Cut Shape 1	Item 2 Fold and Cut Shape 2	Item 3 Fold and Cut Shape 3
	50 (3.3)	50 (3.8)	53 (3.3)	46 (4.2)

Around the Bend Task	Overall Task Average [▼]	Item 1 Measure Models	Item 2 Convert Using Scale	Item 3 Draw Models to Scale	Item 4 Solve Problem With Models
	47 (3.3)	49 (5.1)	29 (4.8)	47 (5.0)	62 (3.9)

Packaging Task	Overall Task Average [▼]	Item 1 Draw Boxes	Item 2 Draw Nets	Item 3 Construct Net to Scale
	28 (3.4)	25 (3.9)	28 (3.3)	33 (4.8)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

* Percent of total possible points on each item averaged over students.

▼ Average of percentage scores across items; all items weighted equally.

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

