Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Attributes and Units	Knowing Facts and Procedures

250 ml bottles filled by 400 liters

The wat	e number of 250 milliliter bottles that can be filled from 400 liters of eer is
A	16
B	160
C	1,600
D	16,000
_	
em N	lumber: M022005

Correct Response:

С

Singapore	68	
Netherlands	59	
Belgium (Flemish)	55	
Sweden	54	
Malaysia	53	
Latvia	51	
Estonia	50	
Australia	49	
Lithuania	49	
Romania	48	
Hungary	48	
Hong Kong, SAR	47	
Russian Federation	46	
Slovak Republic	44	
Japan	44	
Moldova, Republic of	43	0
Italy	42	0
Norway	42	0
England	42	0
Armenia	42	0
New Zealand	41	0
Slovenia	41	0
Korea, Republic of	41	0
Chinese Taipei	41	0
	4.1	0
Cyprus	41	0
Cyprus Scotland	41 40	0
Cyprus Scotland Bulgaria	41 40 39	0 0
Cyprus Scotland Bulgaria International average	41 40 39 39	0
Cyprus Scotland Bulgaria International average Serbia and Montenegro	41 40 39 39 38	0 0 0
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel	41 40 39 39 38 38 38	0 0 0 0 0 0
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States	41 40 39 39 38 38 38 33	0 0 0 0 0
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines	41 40 39 39 38 38 38 33 32	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia	41 40 39 38 38 38 33 32 32 32	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa	41 40 39 38 38 38 33 32 32 32 31	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth.	41 40 39 38 38 38 33 32 32 32 31 30	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon	41 40 39 39 38 38 38 33 32 32 31 30 30	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile	41 40 39 38 38 38 33 32 32 31 30 30 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan	41 40 39 38 38 38 33 32 32 31 30 30 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of	41 40 39 38 38 33 32 32 31 30 30 29 29 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt	41 40 39 38 38 33 32 32 31 30 30 29 29 29 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of	41 40 39 38 38 38 33 32 32 31 30 30 29 29 29 29 29 29 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of Tunisia Debraio	41 40 39 38 38 33 32 32 31 30 30 29 29 29 29 29 29 29 29 29 29 29 27 77	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of Tunisia Bahrain	41 40 39 38 38 33 32 32 31 30 30 29 29 29 29 29 29 29 29 29 29 29 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of Tunisia Bahrain Botswana Caudi Arabia	41 40 39 38 38 33 32 32 31 30 29 29 29 29 29 29 29 29 29 29 29 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of Tunisia Bahrain Botswana Saudi Arabia	41 40 39 38 38 32 32 31 30 29 29 29 29 29 29 29 29 29 29 29 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of Tunisia Bahrain Botswana Saudi Arabia Morocco	41 40 39 38 38 33 32 32 31 30 29 29 29 29 29 29 29 29 29 29 29 29 29	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of Tunisia Bahrain Botswana Saudi Arabia Morocco Ghana	 41 40 39 38 38 33 32 32 31 30 29 2	
Cyprus Scotland Bulgaria International average Serbia and Montenegro Israel United States Philippines Indonesia South Africa Palestinian Nat'l Auth. Lebanon Chile Jordan Macedonia, Republic of Egypt Iran, Islamic Republic of Tunisia Bahrain Botswana Saudi Arabia Morocco Ghana	41 40 39 38 38 33 32 32 31 30 29 29 29 29 29 29 29 29 29 29 29 29 29	

International average:		
Higher Not different	0	
Lower	•	

٦

ľ

Overall Percent Correct

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Attributes and Units	Knowing Facts and Procedures

Which is least amount of time

Whi	ch of these is the LEAST amount of time?	Chinese Taipei	66	
		Korea, Republic of	63	
	1 day	Hungary	63	
0		Singapore	60	
B	20 hours	Belgium (Flemish)	59	
0	1 800 minutes	Japan	54	
C	1,000 minutos	Hong Kong, SAR	54	
D	90,000 seconds	Slovenia	54	
		Slovak Republic	52	
		Netherlands	52	
		Latvia	51	
		Armenia	50	
		Serbia and Montenegro	49	
		Estonia	48	
		Macedonia, Republic of	48	
		Russian Federation	47	
		United States	47	
		Malaysia	47	0
		Moldova, Republic of	45	0
		Italy	45	0
		Bulgaria	44	0
		Sweden	44	0
		International average	43	D
		Romania	43	0
		Lithuania	42	0
		Israel	41	0
		Tunisia	41	0
		Australia	41	0
		Lebanon	40	0
		Cyprus	39	
		England	39	0
		Norway	39	
		Jordan	38	
		Scotland	38	
		Palestinian Nat'l Auth.	37	
em N	lumber: M022188	New Zealand	36	
		Egypt	36	
		Chile	35	
		Saudi Arabia	35	
		Philippines	35	
		Iran, Islamic Republic of	35	
		South Africa	32	
		Bahrain	32	
		Morocco	32	
		Ghana	27	
		Indonesia	26	

Country average vs. International average:	
Higher	
Not different	0
Lower	V

Botswana

26

Item Nu

Correct Response: В

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Attributes and Units	Knowing Facts and Procedures

The unit used for a soccer field

Which of these units would usually be used for an area the size of a soccer field?

- (A) square centimeters
- (B) cubic centimeters
- © square meters
- (D) cubic meters

Item Number: M032699

Correct Response:

С

1		
Estonia	90	
Sweden	89	
New Zealand	89	
Italy	88	
Singapore	88	
Hungary	88	
Australia	87	
Slovak Republic	87	
Chile	87	
Belgium (Flemish)	86	
Netherlands	86	
Latvia	86	
Romania	86	
Lithuania	84	
Serbia and Montenegro	84	
Bulgaria	84	
Russian Federation	83	
Hong Kong, SAR	82	
Chinese Taipei	82	
lanan	82	
England	82	
Moldova Republic of	82	
Scotland	81	
Norway	80	
Malavsia	77	
United States	76	0
Macedonia Republic of	76	0
International average	75	
Korea, Republic of	74	0
Slovenia	74	0
Israel	73	0
Armenia	71	•
Cyprus	69	•
Tunisia	68	
Indonesia	66	
Bahrain	66	.
Morocco	64	•
lordan	64	
Eavot	62	
Botswana	61	
Philippines	60	V
Palestinian Nat'l Auth	58	
Lebanon	56	, v
Saudi Arabia	55	•
	55	•
Iran Islamic Republic of	52	
Iran, Islamic Republic of	52 52	•
Iran, Islamic Republic of South Africa Ghana	52 52 35	•
Iran, Islamic Republic of South Africa Ghana	52 52 35	•

Country average vs. International average:	
Higher	
Not different	0
Lower	▼

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Attributes and Units	Knowing Facts and Procedures

Measure of the area of a triangle

Which of these could be the measure of the area of a triangle?	Japan Singapore
\bigcirc 2 cm	Estonia
	Chinese Taipei
(B) 3 m	Belgium (Flemish)
(c) 5 cm ²	Russian Federation
\bigcirc 8 m ³	Hong Kong, SAR
	Slovenia
	Netherlands
	Lithuania
	Korea Republic of
	Hungary
	Slovak Republic
	Serbia and Montenegro
	Italy
	Malaysia
	Romania
	Latvia
	New Zealand
	Moldova, Republic of
	International average
	Lebanon
	Norway
	Macadania Ropublic of
	Cyprus
	England
	Scotland
	Botswana
	United States
	Egypt
	Jordan
	Indonesia
Item Number: M032732	Armenia
	Israel
	Palestinian Nat'l Auth
	Bahrain
	Chile
	Ghana
	South Africa
	Saudi Arabia
	Saudi Arabia Morocco

Overall Percent Correct

h

•

•

▼

▼

▼

▼

▼

▼

▼

▼

▼

▼

V

V

•

▼

▼

Country average vs. International average: Higher A Not different O Lower V

Iran, Islamic Republic of

Correct Response:

С

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Knowing Facts and Procedures

Actual length of box from rounded measure

The length of a box is 9 cm to the nearest centimeter. Which of these could be the actual length of the box? (A) 10 cm (B) 9.9 cm © 9.6 cm (D) 8.6 cm

Item Number: M012003

Correct Response:

D

Korea. Republic of	90	
Hungary	89	
Netherlands	88	
Hong Kong, SAR	87	
Singapore	87	
Belgium (Flemish)	82	
Slovak Republic	81	
Chinese Taipei	80	
Sweden	80	
Scotland	76	
England	75	
Australia	73	
Russian Federation	73	
Latvia	70	
Estonia	67	
Linited States	67	
New Zealand	65	
Israel	64	
lanan	64	
Malaysia	62	
Norway	61	
Romania	50	
Corbia and Montonagra	20	
	55	
Slovenia	53	0
Italy	50	0
Italy	52	0
Italy International average	52 50	0
Italy International average Armenia Macedonia, Republic of	52 50 45 42	0
Italy International average Armenia Macedonia, Republic of Moldova, Republic of	52 50 45 42 42	0
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Iordan	52 50 45 42 42 39	0 • •
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile	52 50 45 42 42 39 38	 ○ ▼ <
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus	52 50 45 42 42 39 38 38	0 V V V V
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Babrain	52 50 45 42 42 39 38 37 33	0 V V V V V
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth	52 50 45 42 42 39 38 37 33 33	0 V V V V V V V V
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Equat	52 50 45 42 39 38 37 33 33 30	0 V V V V V V V V V
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia	52 45 42 39 38 37 33 33 30 30	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria	52 50 45 42 39 38 37 33 33 30 30 28	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon	52 45 42 39 38 37 33 33 30 30 28 23	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philipoipaes	52 50 45 42 39 38 37 33 33 30 30 28 23 23	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania	52 45 42 39 38 37 33 33 30 30 28 23 23 23 21	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana	52 45 42 39 38 37 33 33 30 30 28 23 23 21 20	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana Iran, Islamic Popublic of	52 45 42 39 38 37 33 33 30 30 28 23 23 21 20 15	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana Iran, Islamic Republic of Saudi Arabia	52 45 42 39 38 37 33 30 30 28 23 23 21 20 15 12	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana Iran, Islamic Republic of Saudi Arabia South Africa	52 45 42 39 38 37 33 30 30 28 23 23 23 21 20 15 13 12	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana Iran, Islamic Republic of Saudi Arabia South Africa Ghana	52 45 42 39 38 37 33 30 30 28 23 23 23 21 20 15 13 13 8	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana Iran, Islamic Republic of Saudi Arabia South Africa Ghana Macesce	52 45 42 39 38 37 33 30 30 28 23 23 23 21 20 15 13 13 8 8	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana Iran, Islamic Republic of Saudi Arabia South Africa Ghana Morocco Tupicia	52 45 42 39 38 37 33 30 30 28 23 23 23 21 20 15 13 13 8 8 8 7	
Italy International average Armenia Macedonia, Republic of Moldova, Republic of Jordan Chile Cyprus Bahrain Palestinian Nat'l Auth. Egypt Indonesia Bulgaria Lebanon Philippines Lithuania Botswana Iran, Islamic Republic of Saudi Arabia South Africa Ghana Morocco Tunisia	52 45 42 39 38 37 33 30 30 28 23 23 23 21 20 15 13 13 8 8 8 7	

Country average vs. International average:	
Higher	
Not different	0
Lower	V

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Knowing Facts and Procedures

Length of pipe from meter scale



Item Number: M012038

Correct Response: C

Singapore	95	
Hong Kong, SAR	94	
Japan	93	
Estonia	91	
Chinese Taipei	90	
Korea, Republic of	89	
Netherlands	89	
Belgium (Flemish)	87	
Hungary	86	
Malaysia	86	
Sweden	86	
Latvia	83	
Russian Federation	82	
Lithuania	81	
Scotland	81	
England	80	
New Zealand	79	
Slovak Republic	79	
Slovenia	79	
Australia	78	
Italy	74	
Norway	74	
United States	73	
Bulgaria	72	
Israel	72	
Serbia and Montenegro	72	
Macedonia, Republic of	70	0
International average	67	
Lebanon	64	0
Moldova, Republic of	64	0
Romania	64	0
Botswana	61	
Cyprus	61	
Chile America	58	
Armenia	54 F4	. <u>.</u>
Indonesia	54	-
Tunicio	5U 40	-
Iunisia Iran Islamic Popublic of	49 10	-
	40	-
South Africa	42	-
Ghana	40 20	.
Iordan	38	.
Palestinian Nat'l Auth	3/	.
Rahrain	37	•
Favot	31	, v
Saudi Arabia	27	
		•

Country average vs.	
International average:	
Higher	
Not different	0
Lower	▼

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Knowing Facts and Procedures

Area of paved walkway around pool



Item Number: M022021

Correct Response:

С

C.		
Singapore	86	
Hong Kong, SAR	82	
Korea, Republic of	77	
Chinese Taipei	77	
Japan	76	
Malaysia	60	
Netherlands	57	
Estonia	53	
Belgium (Flemish)	51	
Slovak Republic	50	
Sweden	48	
Australia	46	
Italy	45	
New Zealand	44	0
Lithuania	43	
Hungary	43	
England	40	0
Slovenia	40	0
United States	40	0
Cyprus	39	0
Scotland	39	0
International average	38	
Serbia and Montenegro	38	0
Latvia	38	0
Bulgaria	38	0
Bulgaria Russian Federation	38 38	0 0
Bulgaria Russian Federation Israel	38 38 37	0 0 0
Bulgaria Russian Federation Israel Egypt	38 38 37 33	0 0 0 V
Bulgaria Russian Federation Israel Egypt Moldova, Republic of	38 38 37 33 33	0 0 V V
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway	38 38 37 33 33 32	0 0 • •
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania	38 38 37 33 33 32 30	0 0 • •
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of	38 37 33 33 32 30 28	0 0 V V V
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia	38 38 37 33 33 32 30 28 28 28	0 0 V V V V
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan	38 38 37 33 33 32 30 28 28 28 26	0 0 7 7 7 7 7
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia	38 38 37 33 33 32 30 28 28 28 26 25	0 0 7 7 7 7 7 7 7
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain	38 37 33 32 30 28 28 26 25 23	0 0 7 7 7 7 7 7 7 7
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'l Auth.	38 37 33 32 30 28 28 26 25 23 22	0 0 7 7 7 7 7 7 7 7 7
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'l Auth. Macedonia, Republic of	38 37 33 32 30 28 28 26 25 23 22 20	0 0 7 7 7 7 7 7 7 7 7 7
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'I Auth. Macedonia, Republic of Lebanon	 38 37 33 32 30 28 28 26 25 23 22 20 19 	0 0 7 7 7 7 7 7 7 7 7 7 7
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'I Auth. Macedonia, Republic of Lebanon Chile	 38 38 37 33 32 30 28 28 26 25 23 22 20 19 19 	
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'I Auth. Macedonia, Republic of Lebanon Chile Tunisia	 38 38 37 33 32 30 28 28 26 25 23 22 20 19 18 	
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'I Auth. Macedonia, Republic of Lebanon Chile Tunisia	 38 38 37 33 32 30 28 28 26 25 23 22 20 19 18 18 	
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'I Auth. Macedonia, Republic of Lebanon Chile Tunisia Morocco Saudi Arabia	 38 38 37 33 32 30 28 26 25 23 22 20 19 18 18 17 	
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'I Auth. Macedonia, Republic of Lebanon Chile Tunisia Morocco Saudi Arabia Botswana	 38 38 37 33 32 30 28 26 25 23 22 20 19 18 18 17 16 	
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'I Auth. Macedonia, Republic of Lebanon Chile Tunisia Morocco Saudi Arabia Botswana Philippines	 38 38 37 33 32 30 28 26 25 23 22 20 19 18 18 17 16 16 	
Bulgaria Russian Federation Israel Egypt Moldova, Republic of Norway Romania Iran, Islamic Republic of Armenia Jordan Indonesia Bahrain Palestinian Nat'l Auth. Macedonia, Republic of Lebanon Chile Tunisia Morocco Saudi Arabia Botswana Philippines South Africa	 38 38 37 33 32 30 28 26 25 23 22 20 19 18 18 17 16 16 16 	

Country average vs. International average:	
Higher	
Not different	0
Lower	

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Reasoning

Oranges are packed in boxes

Oranges are packed in boxes. The average diameter of the oranges is 6 cm, and the boxes are 60 cm long, 36 cm wide, and 24 cm deep.

Which of these is the BEST approximation of the number of oranges that can be packed in a box?

A	30
---	----

- 240B
- (C) 360

D 1,920

Item Number: M032647

Correct Response:

В

Overall Percent Correct			
	Overal	Dorcont	Corroct
	Overai	reiteilt	Correct

lanan	62	
Netherlands	61	
Sweden	57	
Singapore	57	
Belgium (Elemish)	56	
Australia	56	
Fngland	55	
Korea Republic of	55	
Chinese Tainei	55	
Hungary	55	
Latvia	54	
Scotland	53	
Russian Federation	53	
Estonia	53	
Hong Kong, SAR	51	
Slovenia	51	
Slovak Republic	51	
New Zealand	51	
Lithuania	50	
United States	50	
Nonway	18	
Bulgaria	40	
Italy	40	0
International average	45	0
international average		
Sarbia and Montanagra	12	\cap
Serbia and Montenegro	43 42	0
Serbia and Montenegro Cyprus Moldova, Republic of	43 42 42	0 0
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of	43 42 42 41	0 0 0
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chilo	43 42 42 41	0 0 0
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile	43 42 42 41 40 20	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana	43 42 42 41 40 39 37	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia	43 42 42 41 40 39 37 37	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania	 43 42 42 41 40 39 37 37 26 	0 0 0 V V
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania	 43 42 42 41 40 39 37 37 36 25 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philipoipoc	 43 42 42 41 40 39 37 37 36 35 35 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines	 43 42 42 41 40 39 37 37 36 35 35 24 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Rabrain	 43 42 41 40 39 37 36 35 35 34 22 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Equat	 43 42 41 40 39 37 36 35 35 34 32 32 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunicia	 43 42 41 40 39 37 36 35 35 34 32 32 31 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia	 43 42 41 40 39 37 36 35 34 32 31 31 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Ropublic of	 43 42 41 40 39 37 36 35 35 34 32 31 31 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Republic of South Africa	 43 42 41 40 39 37 36 35 35 34 32 31 31 31 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Republic of South Africa Armenia	 43 42 41 40 39 37 36 35 35 34 32 31 31 31 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Republic of South Africa Armenia	 43 42 41 40 39 37 36 35 35 34 32 31 31 31 31 31 31 32 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Republic of South Africa Armenia Jordan Ghana	 43 42 41 40 39 37 36 35 34 32 31 31 31 29 20 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Republic of South Africa Armenia Jordan Ghana Paloctinian Nat'l Auth	 43 42 41 40 39 37 36 35 34 32 31 31 31 29 29 28 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Republic of South Africa Armenia Jordan Ghana Palestinian Nat'l Auth.	 43 42 41 40 39 37 36 35 34 32 31 31 31 31 29 28 28 	
Serbia and Montenegro Cyprus Moldova, Republic of Macedonia, Republic of Chile Israel Botswana Malaysia Romania Morocco Philippines Lebanon Bahrain Egypt Tunisia Indonesia Iran, Islamic Republic of South Africa Armenia Jordan Ghana Palestinian Nat'l Auth. Saudi Arabia	 43 42 41 40 39 37 36 35 34 32 31 31 31 29 28 28 	

Country avera	ge vs. /erage:
Higher	
Not different	0
Lower	

Content Domain	Main Topic	Cognitive Doma	ain
MEASUREMENT	Tools, Techniques, and Formulas	Solving Routine Pro	blems
ngth of rectangle from width/p	perimeter	Overall Percent	Correc
A thin wire 20 centimeters long is form this rectangle is 4 centimeters, what is	ned into a rectangle. If the width of s its length?	Singapore Japan Chinese Taipei	81 65 62
A) 5 centimeters		Hong Kong, SAR Korea, Republic of	62 A
 6 centimeters 12 centimeters 		Netherlands Belgium (Flemish)	56 🔺
) 16 centimeters		Sweden Estonia	54 4 53 4
		Australia Russian Federation	52 50 47
		England Slovak Republic	46 45
		Serbia and Montenegro	45

Item Number: M012030

Correct Response:

В

New Zealand 45 Israel 44 43 Bulgaria 43 Romania 42 Italy Malaysia 41 0 40 0 Norway Moldova, Republic of 39 0 United States 39 0 Lithuania 38 0 International average 37 0 Scotland 37 Hungary 37 0 Cyprus 36 0 Slovenia 33 ▼ Armenia 31 ▼ ▼ Iran, Islamic Republic of 28 ▼ Macedonia, Republic of 27 ▼ Chile 27 Tunisia 26 ▼ Lebanon 23 ▼ ▼ Jordan 22 ▼ Palestinian Nat'l Auth. 19 Egypt 18 ▼ Bahrain 18 ▼ Botswana 17 ▼ 16 ▼ South Africa Saudi Arabia 14 ▼ Morocco 14 ▼ ▼ Philippines 14 13 ▼ Indonesia Ghana 13 ▼

Country average	ge vs.
International av	erage:
Higher	
Not different	0
Lower	•

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Solving Routine Problems

Time when finish homework

Kris begins her homework at 6:40. If it takes Kris three-quarters of an hour to do her homework, at what time will she finish?

Answer: _____

Item Number: M022148

SCORING

Correct Response

- 7:25
- Other response equivalent to 7:25.

Incorrect Response

- 7:20
- 7:30
- 6:25
- Other incorrect (including crossed out/erased, stray marks, illegible, or off task).

Netherlands	91	
Belgium (Flemish)	85	
Hungary	84	
England	80	
Sweden	78	
Singapore	78	
Scotland	76	
Australia	72	
Norway	71	
New Zealand	68	
Hong Kong, SAR	67	
Slovenia	67	
Italy	65	
Romania	63	
Japan	63	
Israel	63	
Slovak Republic	59	
Chinese Taipei	59	
Estonia	58	
Cyprus	58	
Korea, Republic of	57	
United States	55	
Malaysia	51	
Latvia	46	0
International average	45	
International average Lebanon	45 45	0
International average Lebanon Moldova, Republic of	45 45 42	0 0
International average Lebanon Moldova, Republic of Russian Federation	45 45 42 41	0 0 0
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro	45 45 42 41 36	0 0 0
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria	45 42 41 36 36	0 0 0 V
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia	45 42 41 36 36 35	0 0 0 •
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania	45 42 41 36 36 35 34	0 0 ♥ ♥ ♥
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile	45 42 41 36 35 34 29	0 0 V V V
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia	45 42 41 36 35 34 29 20	0 0 V V V V
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt	45 42 41 36 36 35 34 29 20 20	○ ○ ▼ ▼ ▼ ▼
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan	45 42 41 36 35 34 29 20 20 20 19	0 0 7 7 7 7 7 7 7
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of	45 45 42 41 36 35 34 29 20 20 20 19 18	0 0 * * * * *
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia	45 45 42 41 36 35 34 29 20 20 20 19 18 18	0 0 7 7 7 7 7 7 7 7 7 7
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth.	45 45 42 41 36 35 34 29 20 20 20 19 18 18 18 16	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco	45 45 42 41 36 35 34 29 20 20 20 19 18 18 18 16 15	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco Iran, Islamic Republic of	45 45 42 41 36 35 34 29 20 20 20 20 19 18 18 18 16 15 15	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco Iran, Islamic Republic of Bahrain	45 45 42 41 36 35 34 29 20 20 20 20 19 18 18 18 16 15 15 14	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco Iran, Islamic Republic of Bahrain Botswana	45 45 42 41 36 35 34 29 20 20 20 20 19 18 18 18 16 15 15 14 11	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco Iran, Islamic Republic of Bahrain Botswana Saudi Arabia	45 45 42 41 36 35 34 29 20 20 20 20 19 18 18 18 16 15 15 14 11 9	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco Iran, Islamic Republic of Bahrain Botswana Saudi Arabia South Africa	45 45 42 41 36 35 34 29 20 20 20 19 18 18 16 15 15 14 11 9 8	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco Iran, Islamic Republic of Bahrain Botswana Saudi Arabia South Africa Philippines	45 45 42 41 36 35 34 29 20 20 20 19 18 18 16 15 15 14 11 9 8 8 8	
International average Lebanon Moldova, Republic of Russian Federation Serbia and Montenegro Bulgaria Armenia Lithuania Chile Tunisia Egypt Jordan Macedonia, Republic of Indonesia Palestinian Nat'l Auth. Morocco Iran, Islamic Republic of Bahrain Botswana Saudi Arabia South Africa Philippines Ghana	45 45 42 41 36 35 34 29 20 20 20 19 18 18 16 15 15 14 11 9 8 8 4	

Country avera	ge vs. rerage:
Higher	
Not different	0
Lower	

Time when finish homework (continued)

Item Number: M022148

Student Responses

Correct Response:

Kris begins her homework at 6:40. If it takes Kris three-quarters of an hour to do her homework, at what time will she finish?

7:25 Answer:

.

Incorrect Response:

Kris begins her homework at 6:40. If it takes Kris three-quarters of an hour to do her homework, at what time will she finish?

Answer: 7:20

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Solving Routine Problems

5 squares: area of one square





C. Find the perimeter of the whole figure in centimeters.

Answer: _____ cm

Item Number: M022227A

SCORING

Correct Response

• 49

Incorrect Response

• 1

Other incorrect (including crossed out/erased, stray marks, illegible, or off task).

Singapore	89	
Hong Kong, SAR	88	
Korea. Republic of	87	
Japan	86	
Armenia	84	
Chinese Tainei	83	
Estonia	69	
Netherlands	69	
Russian Endoration	68	
Radaium (Flemish)	67	
Slovenia	66	
Scotland	63	
	60	
Malaycia	60	
lupgan	60	
Huligary Bulgaria	50	-
Bulgaria	59	
Romania	58	
Iunisia	5/	
Moldova, Republic of	5/	
Italy	57	
Slovak Republic	57	
Lithuania	57	
Australia	56	0
International average	51	
international average	21	
Lebanon	49	0
Lebanon Sweden	49 48	0
Lebanon Sweden England	49 48 47	0 0 0
Lebanon Sweden England Serbia and Montenegro	49 48 47 47	0 0 0
Lebanon Sweden England Serbia and Montenegro Israel	49 48 47 47 47	0 0 0 V
Lebanon Sweden England Serbia and Montenegro Israel Egypt	49 48 47 47 47 47 46	0 0 V V
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand	49 48 47 47 47 46 45	0 0 ♥ ♥
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan	49 48 47 47 47 46 45 45	0 0 ▼ ▼ ▼
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus	49 48 47 47 47 46 45 45 43	0 0 V V V
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of	49 48 47 47 47 46 45 45 43 41	○ ○ ▼ ▼ ▼ ▼
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of	49 48 47 47 47 46 45 45 45 43 41 38	0 0 7 7 7 7 7 7 7
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Bahrain	49 48 47 47 46 45 45 45 43 41 38 37	0 0 7 7 7 7 7 7 7 7 7 7
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Bahrain Indonesia	49 48 47 47 47 46 45 45 45 43 41 38 37 33	0 0 7 7 7 7 7 7 7 7 7 7 7 7 7
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines	49 48 47 47 47 46 45 45 43 41 38 37 33 32	0 0 7 7 7 7 7 7 7 7 7 7 7
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway	49 48 47 47 47 46 45 45 43 41 38 37 33 32 32 32	0 0 7 7 7 7 7 7 7 7 7 7 7 7
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco	49 48 47 47 47 46 45 45 43 41 38 37 33 32 32 31	
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco Palestinian Nat'l Auth.	49 48 47 47 47 46 45 45 43 41 38 37 33 32 32 32 31 30	
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco Palestinian Nat'l Auth. Botswana	49 48 47 47 47 46 45 45 43 41 38 37 33 32 32 31 30 28	
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco Palestinian Nat'l Auth. Botswana Chile	49 48 47 47 47 46 45 45 43 41 38 37 33 32 32 31 30 28 24	
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco Palestinian Nat'l Auth. Botswana Chile Saudi Arabia	49 48 47 47 47 46 45 45 43 41 38 37 33 32 32 31 30 28 24 15	
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco Palestinian Nat'l Auth. Botswana Chile Saudi Arabia Ghana	49 48 47 47 46 45 45 43 41 38 37 33 32 32 31 30 28 24 15 10	
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco Palestinian Nat'l Auth. Botswana Chile Saudi Arabia Ghana South Africa	49 48 47 47 46 45 45 43 41 38 37 33 32 32 31 30 28 24 15 10 8	
Lebanon Sweden England Serbia and Montenegro Israel Egypt New Zealand Jordan Cyprus Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Bahrain Indonesia Philippines Norway Morocco Palestinian Nat'l Auth. Botswana Chile Saudi Arabia Ghana South Africa Latvia	49 48 47 47 46 45 45 43 41 38 37 33 32 32 31 30 28 24 15 10 8	

Country average International av	ge vs. erage:
Higher	
Not different	0
Lower	•

5 squares: area of one square (continued)

Item Number: M022227A

Student Responses

Correct Response:

The figure consists of 5 squares of equal area. The area of the whole figure is 245 cm².



Incorrect Response:

55. The figure consists of 5 squares of equal area. The area of the whole figure is $\frac{245 \text{ cm}^2}{49}$





Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Solving Routine Problems

5 squares: length of one side



Answer: _____ cm

Item Number: M022227B

SCORING

Correct Response

- 7 (or 49)
- · Correct square root of incorrect answer to part a.

Incorrect Response

- + 1 only if the answer to part A is not 1.
- Indication of division of area of one square (as obtained in part a) by 4 (e.g., 12.25, 49/4, etc.).
- 24.5 or other indication of division by 2.
- Other incorrect (including crossed out/erased, stray marks, illegible, or off task).

Singapore	80	
Hong Kong SAR	78	
Korea Republic of	70	
Chinese Tainei	65	
Armonia	60	
Annenia	02	-
Romania	45	
Russian Federation	43	
Italy	43	
Japan	42	
Estonia	39	
Netherlands	38	
Belgium (Flemish)	37	
Serbia and Montenegro	36	
Moldova, Republic of	35	
Hungary	35	
Malaysia	34	
Lithuania	33	
Bulgaria	32	0
United States	29	0
Slovak Benublic	29	0
Slovania	20	0
International average	22	0
Castland	20	0
Australia	27	0
ALICTEALIA	2h	()
Australia	20	0
England	23	0
England Sweden	23 23 23	0
England Sweden New Zealand	23 23 23	0 ▼ ▼
England Sweden New Zealand Cyprus	23 23 23 23 21	0 ▼ ▼
England Sweden New Zealand Cyprus Israel	23 23 23 21 20	0 • •
England Sweden New Zealand Cyprus Israel Macedonia, Republic of	23 23 23 21 20 20	0 V V V V V
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt	23 23 23 21 20 20 20	0 • • • •
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon	20 23 23 21 20 20 20 18	0 V V V V V V V
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia	23 23 23 21 20 20 20 18 17	0 * * * * *
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan	20 23 23 21 20 20 20 20 18 17 16	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth.	20 23 23 21 20 20 20 18 17 16 16	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia	23 23 23 21 20 20 20 18 17 16 16 15	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain	23 23 23 21 20 20 20 18 17 16 16 15 14	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway	23 23 23 21 20 20 20 18 17 16 16 15 14 11	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of	23 23 23 21 20 20 20 18 17 16 16 15 14 11 11	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines	23 23 23 21 20 20 20 18 17 16 15 14 11 11 10	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines Tunisia	23 23 23 21 20 20 20 18 17 16 15 14 11 11 10 9	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines Tunisia Morocco	23 23 23 21 20 20 20 18 17 16 16 15 14 11 11 10 9 8	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines Tunisia Morocco Saudi Arabia	23 23 23 21 20 20 20 20 18 17 16 16 15 14 11 11 0 9 8 8 8	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines Tunisia Morocco Saudi Arabia Chile	23 23 23 21 20 20 20 20 18 17 16 16 15 14 11 10 9 8 8 6	
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines Tunisia Morocco Saudi Arabia Chile Botswana	23 23 23 21 20 20 20 20 18 17 16 16 15 14 11 10 9 8 8 6 4	
England England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines Tunisia Morocco Saudi Arabia Chile Botswana South Africa	23 23 23 21 20 20 20 18 17 16 16 15 14 11 10 9 8 8 6 4 3	$\begin{array}{c} \circ \\ \circ \\ \bullet \\$
England Sweden New Zealand Cyprus Israel Macedonia, Republic of Egypt Lebanon Latvia Jordan Palestinian Nat'l Auth. Indonesia Bahrain Norway Iran, Islamic Republic of Philippines Tunisia Morocco Saudi Arabia Chile Botswana South Africa Ghana	23 23 23 21 20 20 20 18 17 16 16 15 14 11 10 9 8 8 6 4 3 2	$\begin{array}{c} \circ \\ \circ \\ \bullet \\$

Country average vs. International average:	
Higher	
Not different	0
Lower	•

5 squares: length of one side (continued) Item Number: M022227B

Ŧ

Student Responses

Correct Response:

18. The figure consists of 5 squares of equal area. The area of the whole figure is 245 cm^2 .



b. Find the length of one side of one square.



Incorrect Response:

The figure consists of 5 squares of equal area. The area of the whole figure is 245 cm².



÷.,

b. Find the length of one side of one square.

15 Answer: cm

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Solving Routine Problems

5 squares: perimeter whole figure



A. Find the area of one square.
Answer: ______ cm²
B. Find the length of one side of one square.
Answer: ______ cm
C. Find the perimeter of the whole figure in centimeters.
Answer: ______ cm

Item Number: M022227C

SCORING

Correct Response

- 84
- 12, on condition 1 was the response for part b.
- Other responses consistent with answer to part b, using multiplication by 12 (e.g., 147, 294, etc.).

Incorrect Response

- · An answer that is 4 times the response to part b.
- Indication of multiplication by 12 but multiplication is incorrect.
- 245 [Confusion between area and perimeter].
- Other incorrect (including crossed out/erased, stray marks, illegible, or off task).

Singapore	72	
Hong Kong, SAR	58	
Korea, Republic of	53	
Chinese Taipei	51	
Japan	47	
Armenia	42	
Malaysia	38	
Netherlands	38	
Australia	30	
Scotland	27	
England	27	
Estonia	26	
Belgium (Flemish)	25	
Hungary	24	
Slovenia	24	
Slovak Republic	24	
New Zealand	23	0
Russian Federation	23	0
United States	23	0
Italy	22	0
Lithuania	22	0
Sweden	21	0
International average	20	
	10	0
Serbia and Montenegro	18	0
Serbia and Montenegro Latvia	18 17	0
Serbia and Montenegro Latvia Cyprus	18 17 17	0 0
Serbia and Montenegro Latvia Cyprus Norway	18 17 17 16	0 0 0
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of	18 17 17 16 16	0 0 0 0
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania	18 17 17 16 16 16	0 0 0 0
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria	18 17 16 16 16 16 14	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel	18 17 16 16 16 16 14 12	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of	18 17 16 16 16 14 12 8	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia	18 17 16 16 16 14 12 8 7	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia	18 17 16 16 16 14 12 8 7 5	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile	18 17 16 16 16 14 12 8 7 5 5	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt	18 17 16 16 16 14 12 8 7 5 5 5 5	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan	18 17 16 16 16 14 12 8 7 5 5 5 5 5 5	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain	18 17 16 16 16 14 12 8 7 5 5 5 5 4	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth.	18 17 16 16 14 12 8 7 5 5 5 5 4 4	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana	18 17 16 16 14 12 8 7 5 5 5 4 4 3	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana Lebanon	18 17 16 16 16 14 12 8 7 5 5 5 4 4 3 3	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana Lebanon Morocco	18 17 16 16 16 14 12 8 7 5 5 5 4 4 3 3 2	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana Lebanon Morocco Iran, Islamic Republic of	18 17 16 16 16 14 12 8 7 5 5 5 4 4 3 2 2	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana Lebanon Morocco Iran, Islamic Republic of South Africa	18 17 16 16 16 14 12 8 7 5 5 5 4 4 3 2 2 2 2	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana Lebanon Morocco Iran, Islamic Republic of South Africa Philippines	18 17 16 16 16 14 12 8 7 5 5 5 4 4 3 2 2 2 2 2	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana Lebanon Morocco Iran, Islamic Republic of South Africa Philippines Saudi Arabia	18 17 16 16 16 14 12 8 7 5 5 5 4 4 3 2 2 2 2 2 2 2 2	
Serbia and Montenegro Latvia Cyprus Norway Moldova, Republic of Romania Bulgaria Israel Macedonia, Republic of Tunisia Indonesia Chile Egypt Jordan Bahrain Palestinian Nat'l Auth. Botswana Lebanon Morocco Iran, Islamic Republic of South Africa Philippines Saudi Arabia Ghana	18 17 16 16 16 14 12 8 7 5 5 5 4 4 3 2 2 2 2 2 2 1	

Country average vs. International average:	
Higher	
Not different	0
Lower	•

5 squares: perimeter whole figure (continued)

1

Item Number: M022227C

Student Responses

Correct Response:

The figure consists of 5 squares of equal area. The area of the whole figure is 245 cm².



c. Find the perimeter of the whole figure in centimeters.

Answer: cm

Incorrect Response:

The figure consists of 5 squares of equal area. The area of the whole figure is 245 cm².



c. Find the perimeter of the whole figure in centimeters.

Answer: cm

Content Domain	Main Topic	Cognitive Domain
A. MEASUREMENT	Tools, Techniques, and Formulas	Solving Routine Problems
B. MEASUREMENT	Tools, Techniques, and Formulas	Reasoning

Car rally: average speed

In a car rally two checkpoints are 160 km apart. Drivers must travel from one checkpoint to the other in exactly 2.5 hours to earn maximum points.

A. What must the average speed be to travel the 160 km in this time?

Answer: _____

B. A driver took 1 hour to travel through a 40 km hilly section at the beginning of the course.

What must the average speed, in kilometers per hour, be for the remaining 120 km if the total time between checkpoints is to be 2.5 hours?

Answer: _____

Item Number: M032649A

SCORING

Correct Response

• 64 kph or 64 or equivalent.

Incorrect Response

• Incorrect (including crossed out/erased, stray marks, illegible or off task).

Singapore	78	
Hong Kong, SAR	76	
Netherlands	70	
Russian Federation	67	
Armenia	65	
Estonia	64	
Chinese Taipei	59	
Japan	59	
Hungary	59	
Lithuania	56	
United States	55	
Belgium (Flemish)	54	
Latvia	50	
Slovak Republic	49	
Sweden	45	
Korea, Republic of	43	
Scotland	43	
Italy	42	
Moldova, Republic of	38	0
England	37	0
Norway	37	0
Australia	36	0
Israel	36	0
	25	\cap
New Zealand	55	0
International average	35 35	0
International average Serbia and Montenegro	35 35 34	0
International average Serbia and Montenegro Slovenia	35 35 34 33	0
International average Serbia and Montenegro Slovenia Malaysia	35 35 34 33 29	0 0 V
International average Serbia and Montenegro Slovenia Malaysia Romania	35 35 34 33 29 29 29	0 0 V
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria	35 34 33 29 29 29 28 28	0 0 V V
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia	33 34 33 29 29 28 27 26	0 0 V V
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of	 35 35 34 33 29 29 28 27 26 24 	0 0 V V V
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan	33 34 33 29 29 28 27 26 24	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia	33 34 33 29 29 28 27 26 24 22 21	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana	33 34 33 29 29 28 27 26 24 22 21 18	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth.	33 34 33 29 29 28 27 26 24 22 21 18 16	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus	35 34 33 29 28 27 26 24 22 21 18 16 15	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon	35 34 33 29 28 27 26 24 22 21 18 16 15	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Pbilipipipar	33 34 33 29 29 28 27 26 24 22 21 18 16 15 15	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Philippines	33 34 33 29 29 28 27 26 24 22 21 18 16 15 15 14 12	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Philippines Bahrain	 33 34 33 29 29 28 27 26 24 22 21 18 16 15 14 12 8 	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Philippines Bahrain Iran, Islamic Republic of Eravat	33 34 33 29 28 27 26 24 22 21 18 16 15 14 12 8 7	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Philippines Bahrain Iran, Islamic Republic of Egypt South Africa	33 34 33 29 28 27 26 24 22 21 18 16 15 14 12 8 7 7	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Philippines Bahrain Iran, Islamic Republic of Egypt South Africa	33 34 33 29 28 27 26 24 22 21 18 16 15 14 12 8 7 6	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Philippines Bahrain Iran, Islamic Republic of Egypt South Africa Morocco Saudi Arabia	33 34 33 29 28 27 26 24 22 21 18 16 15 14 12 8 7 6 2	
International average Serbia and Montenegro Slovenia Malaysia Romania Bulgaria Tunisia Macedonia, Republic of Jordan Indonesia Botswana Palestinian Nat'l Auth. Cyprus Lebanon Chile Philippines Bahrain Iran, Islamic Republic of Egypt South Africa Morocco Saudi Arabia Ghana	33 34 33 29 28 27 26 24 22 21 18 16 15 14 12 8 7 6 2 2 2	

Country average vs. International average:	
Higher	
Not different	0
Lower 🔻	

Car rally: average speed (continued) Item Number: M032649A

Student Responses

Correct Response:

In a car rally two checkpoints are 160 km apart. Drivers must travel from one checkpoint to the other in exactly 2.5 hours to earn maximum points.

A. What must the average speed be to travel the 160 km in this time?

Answer: 64 Km

Incorrect Response:

In a car rally two checkpoints are 160 km apart. Drivers must travel from one checkpoint to the other in exactly 2.5 hours to earn maximum points.

A. What must the average speed be to travel the 160 km in this time?

Answer: 32

Content Domain	Main Topic	Cognitive Domain
A. MEASUREMENT	Tools, Techniques, and Formulas	Solving Routine Problems
B. MEASUREMENT	Tools, Techniques, and Formulas	Reasoning

Car rally: average speed for one section

In a car rally two checkpoints are 160 km apart. Drivers must travel from one checkpoint to the other in exactly 2.5 hours to earn maximum points.

A. What must the average speed be to travel the 160 km in this time?

Answer: _____

B. A driver took 1 hour to travel through a 40 km hilly section at the beginning of the course.

What must the average speed, in kilometers per hour, be for the remaining 120 km if the total time between checkpoints is to be 2.5 hours?

Answer: _____

Item Number: M032649B

SCORING

Correct Response

• 80 kph or 80

Incorrect Response

- 5, 2, 120 or 48 shown.
- Other incorrect (including crossed out/erased, stray marks, illegible or off task).

Armenia	54	
Singapore	52	
Netherlands	50	
Hong Kong, SAR	47	
Chinese Taipei	39	
Estonia	35	
Russian Federation	34	
Hungary	33	
Japan	33	
Belgium (Flemish)	30	
Sweden	28	
Lithuania	27	
Korea, Republic of	27	
Latvia	24	
United States	24	
Scotland	23	
England	22	0
Australia	22	0
Slovak Republic	21	0
New Zealand	19	0
Norway	19	0
International average	18	
Israel	17	0
Moldova Republic of	17	0
monuora, nepabne or		0
Bulgaria	17	0
Bulgaria Slovenia	17 17 16	0
Bulgaria Slovenia Italy	17 16 15	0 0 0
Bulgaria Slovenia Italy Romania	17 16 15 13	0 0 0 V
Bulgaria Slovenia Italy Romania Serbia and Montenegro	17 16 15 13 10	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of	17 16 15 13 10 8	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia	17 16 15 13 10 8 7	0 0 0 V V
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus	17 16 15 13 10 8 7 6	0 0 7 7 7 7
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan	17 16 15 13 10 8 7 6 6	0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of	17 16 15 13 10 8 7 6 6 5	0 0 7 7 7 7 7 7
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia	17 16 15 13 10 8 7 6 5 5 5	0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile	17 16 15 13 10 8 7 6 5 5 5 5 5	0 0 7 7 7 7 7 7 7 7
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt	17 16 15 13 10 8 7 6 5 5 5 5 4	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana	17 16 15 13 10 8 7 6 5 5 5 4 4	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain	17 16 15 13 10 8 7 6 5 5 5 4 4 4 4	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia	17 16 15 13 10 8 7 6 5 5 5 4 4 4 4 4	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia Palestinian Nat'l Auth.	17 16 15 13 10 8 7 6 5 5 4 4 4 4 4 4 4 4	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia Palestinian Nat'l Auth. South Africa	17 16 15 13 10 8 7 6 5 5 4 4 4 4 4 4 4 3	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia Palestinian Nat'l Auth. South Africa Lebanon	17 16 15 13 10 8 7 6 5 5 4 4 4 4 4 4 4 3 2	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia Palestinian Nat'l Auth. South Africa Lebanon Philippines	17 16 15 13 10 8 7 6 5 5 4 4 4 4 4 4 4 3 2 2	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia Palestinian Nat'I Auth. South Africa Lebanon Philippines Saudi Arabia	17 16 15 13 10 8 7 6 5 5 5 4 4 4 4 4 4 4 3 2 2 2	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia Palestinian Nat'l Auth. South Africa Lebanon Philippines Saudi Arabia Ghana	17 16 15 13 10 8 7 6 5 5 4 4 4 4 4 4 4 3 2 2 1	
Bulgaria Slovenia Italy Romania Serbia and Montenegro Macedonia, Republic of Malaysia Cyprus Jordan Iran, Islamic Republic of Tunisia Chile Egypt Botswana Bahrain Indonesia Palestinian Nat'l Auth. South Africa Lebanon Philippines Saudi Arabia Ghana Morocco	17 16 15 13 10 8 7 6 5 5 4 4 4 4 3 2 2 1 1	

Country average vs. International average:	
Higher	
Not different	0
Lower	▼

Car rally: average speed for one section (continued) *Item Number: M032649B*

Student Responses

Correct Response:

In a car rally two checkpoints are 160 km apart. Drivers must travel from one checkpoint to the other in exactly 2.5 hours to earn maximum points.

B. A driver took 1 hour to travel through a 40 km hilly section at the beginning of the course.

What must the average speed, in kilometers per hour, be for the remaining 120 km if the total time between checkpoints is to be 2.5 hours?

Answer: 80 Km

Incorrect Response:

In a car rally two checkpoints are 160 km apart. Drivers must travel from one checkpoint to the other in exactly 2.5 hours to earn maximum points.

B. A driver took 1 hour to travel through a 40 km hilly section at the beginning of the course.

What must the average speed, in kilometers per hour, be for the remaining 120 km if the total time between checkpoints is to be 2.5 hours?

Answer: 3 Kilometers

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Using Concepts

Volumes of stacks of blocks

All the small blocks are the same size. Which stack of blocks has a different volume from the others?











Item Number: M012013

Correct Response: A

Overall	Percent	Correc

Korea, Republic of	88	
Singapore	86	
Hong Kong, SAR	83	
Japan	81	
Chinese Taipei	81	
Netherlands	78	
Australia	73	
Estonia	69	
Slovak Republic	68	
, Belgium (Flemish)	67	
Scotland	67	
Lithuania	66	
Latvia	64	
Malaysia	62	
Slovenia	62	
New Zealand	60	
Hungary	58	
England	58	
Russian Federation	57	
Norway	56	
Italv	55	
United States	50	0
International average	50	
Sweden	50	\cap
JWeden	50	0
Israel	49	0
Israel Bulgaria	49 48	0
Israel Bulgaria Moldova, Republic of	49 48 48	0 0 0
Israel Bulgaria Moldova, Republic of Romania	49 48 48 46	0 0 0 0
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro	49 48 48 46 45	0 0 0 0
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia	49 48 48 46 45 42	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus	49 48 48 46 45 42 42	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain	 49 48 48 46 45 42 42 41 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines	49 48 48 46 45 42 42 41 35	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon	49 48 48 46 45 42 42 41 35 34	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of	49 48 48 46 45 42 42 41 35 34 33	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia	49 48 48 46 45 42 42 41 35 34 33 32	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia	49 48 48 46 45 42 42 41 35 34 33 32 32	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth.	49 48 48 46 45 42 42 41 35 34 33 32 32 30	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan	49 48 48 46 45 42 41 35 34 33 32 32 30 29	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile	 49 48 48 46 45 42 41 35 34 33 32 32 30 29 27 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile Morocco	 49 48 48 46 45 42 41 35 34 33 32 30 29 27 26 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile Morocco Botswana	 49 48 48 46 45 42 42 41 35 34 33 32 30 29 27 26 26 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile Morocco Botswana Tunisia	 49 48 46 45 42 42 41 35 34 33 32 30 29 27 26 26 26 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile Morocco Botswana Tunisia Iran, Islamic Republic of	 49 48 48 46 45 42 42 41 35 34 33 32 30 29 27 26 26 26 26 26 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile Morocco Botswana Tunisia Iran, Islamic Republic of Egypt	 49 48 48 46 45 42 42 41 35 34 33 32 30 29 27 26 26 26 26 26 24 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile Morocco Botswana Tunisia Iran, Islamic Republic of Egypt South Africa	 49 48 46 45 42 42 41 35 34 33 32 30 29 27 26 26 26 26 26 26 24 22 	
Israel Bulgaria Moldova, Republic of Romania Serbia and Montenegro Armenia Cyprus Bahrain Philippines Lebanon Macedonia, Republic of Saudi Arabia Indonesia Palestinian Nat'l Auth. Jordan Chile Morocco Botswana Tunisia Iran, Islamic Republic of Egypt South Africa Ghana	 49 48 46 45 42 42 41 35 34 33 32 30 29 27 26 24 22 20 	

Country average vs. International average:		
Higher		
Not different	0	
Lower	•	

Content Domain	Main Topic	Cognitive Domain
MEASUREMENT	Tools, Techniques, and Formulas	Using Concepts

The area of the rectangle ABCD



In the figure above, ABCD is a rectangle, and circles P and Q each have a radius of 5 cm. What is the area of the rectangle?

- (A) 50 cm^2
- (B) 60 cm²
- \bigcirc 100 cm²
- \bigcirc 200 cm²

Item Number: M032678

Correct Response: D

Singapore	82	
Hong Kong, SAR	82	
Korea, Republic of	75	
Chinese Taipei	74	
Japan	73	
Netherlands	65	
Belgium (Flemish)	61	
Estonia	53	
Russian Federation	51	
Italy	51	
Slovak Republic	51	
Hungary	48	
Malaysia	48	
Latvia	46	
Lithuania	45	
Sweden	45	
Scotland	44	
England	43	0
Serbia and Montenegro	43	0
Australia	42	0
New Zealand	41	0
Slovenia	41	0
Romania	39	0
International average	39	
United States	39	0
United States Bulgaria	39 38	0
United States Bulgaria Cyprus	39 38 37	0 0 0
United States Bulgaria Cyprus Armenia	39 38 37 36	0 0 0
United States Bulgaria Cyprus Armenia Lebanon	39 38 37 36 35	0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway	39 38 37 36 35 35	0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel	39 38 37 36 35 35 35 34	0 0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of	39 38 37 36 35 35 34 33	0 0 0 0 V
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia	39 38 37 36 35 35 34 33 30	0 0 0 0 0 0 0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of	39 38 37 36 35 35 34 33 30 30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of	39 38 37 36 35 35 34 33 30 30 27	0 0 0 0 V V V
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan	 39 38 37 36 35 34 33 30 20 27 25 	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia	 39 38 37 36 35 34 33 30 30 27 25 24 21 	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Datasia	 39 38 37 36 35 34 33 30 20 21 22 	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain	 39 38 37 36 35 34 33 30 20 21 20 12 	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco	 39 38 37 36 35 34 33 30 27 25 24 21 20 19 12 	
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco Palestinian Nat'l Auth.	 39 38 37 36 35 34 33 30 27 25 24 21 20 19 18 12 	
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco Palestinian Nat'l Auth. Chile Potewapa	39 38 37 36 35 34 33 30 27 25 24 21 20 19 18 18	
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco Palestinian Nat'l Auth. Chile Botswana Philippipor	39 38 37 36 35 34 30 30 27 25 24 21 20 19 18 18 16	
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco Palestinian Nat'l Auth. Chile Botswana Philippines Chana	 39 38 37 36 35 34 30 30 27 25 24 21 20 19 18 16 15 10 	
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco Palestinian Nat'l Auth. Chile Botswana Philippines Ghana South Africo	 39 38 37 36 35 34 30 30 27 25 24 21 20 19 18 16 15 10 	
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco Palestinian Nat'l Auth. Chile Botswana Philippines Ghana South Africa Saudi Arabia	 39 38 37 36 35 34 33 30 20 25 24 21 20 19 18 16 15 10 10 10 	
United States Bulgaria Cyprus Armenia Lebanon Norway Israel Moldova, Republic of Tunisia Macedonia, Republic of Iran, Islamic Republic of Iran, Islamic Republic of Jordan Indonesia Egypt Bahrain Morocco Palestinian Nat'l Auth. Chile Botswana Philippines Ghana South Africa Saudi Arabia	 39 38 37 36 35 34 30 20 27 25 24 21 20 19 18 16 15 10 10 10 	

Country average vs. International average:		
Higher		
Not different	0	
Lower	V	