MARK SCHEME	**نموذج الإجابة وتوزيع الدرجات**
KINGDOM OF BAHRAIN	**مملكة البحرين**
EDUCATION & TRAINING QUALITY AUTHORITY	**هيئة جودة التعليم والتدريب**
Grade 12 National Examinations	الامتحانات الوطنية للصف الثاني عشر
Mathematical Skills 2025	**امتحان المهارات الرياضية ٢٠٢٥**

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the National Examinations. It shows the basis for awarding marks.

Mark schemes must be read in conjunction with the question papers and Marking reports.

1	**Key**	**D**	The number of students who participated in the survey study is 60 students (25 + 10 + 15 + 10). The number of students who prefer Arabic language subject from Al-Amanah School is 15 students. Accordingly, the percentage of students who prefer Arabic language subject in Al-Amanah School to its total students is 25% (60 ÷ 15).
	Distractors		
	A	The percentage of students who prefer Arabic language subject in Al-Sidq School to its total students	
	B	The percentage of students who prefer Arabic language subject in the three schools to the total number of students	
	C	The percentage of students who prefer Arabic language subject in Al-Adalah School to its total students	
2	**Key**	**D**	None of the ingredients from the second group were selected.
	Distractors		
	A	Meets the requirements.	
	B	Meets the requirements.	
	C	Meets the requirements.	
3	**Key**	**B**	There are two small equal sectors, two other equal sectors, and a fifth sector larger than the rest.
	Distractors		
	A	The smallest percentage represents only one circular sector, while there are two equal quantities that are the smallest.	
	C	There are three equal sectors.	
	D	The largest sector represents half of the data.	

<table>
<tr><td>4</td><td>Key</td><td>B</td><td>According to the pricing model approved by Bahrain Post, the shipping cost for each parcel is as follows:

<table><tr><th>Destinations</th><th>Weight of shipment (Gramme)</th><th>Cost (BD)</th></tr><tr><td>Kuwait (Gulf countries)</td><td>456</td><td>7</td></tr><tr><td>Egypt (rest of the Arab countries)</td><td>657</td><td>8 + 1 = 9</td></tr><tr><td>France (Europe)</td><td>821</td><td>9 + 3 = 12</td></tr><tr><td>Australia</td><td>500</td><td>10</td></tr><tr><td colspan="2">Total</td><td>38</td></tr></table>
Thus, the total cost of shipping the four parcels is BD 38.</td></tr>
<tr><td></td><td colspan="3">Distractors</td></tr>
<tr><td></td><td>A</td><td colspan="2">Calculate the cost of the first half kilogram for all parcels only.</td></tr>
<tr><td></td><td>C</td><td colspan="2">Add the cost of an additional half kilogram for the fourth parcel.</td></tr>
<tr><td></td><td>D</td><td colspan="2">Calculate the cost of an additional half kilogram for all parcels.</td></tr>
<tr><td>5</td><td>Key</td><td>B</td><td>By empirical research, the following table can be reached:

<table><tr><th>Number of Regular Tickets</th><th>Number of VIP Tickets</th><th>Total Price (¥)</th></tr><tr><td>0</td><td>5</td><td>500</td></tr><tr><td>5</td><td>3</td><td>500</td></tr><tr><td>10</td><td>1</td><td>500</td></tr></table>
The Table shows that the number of persons who bought VIP tickets is 3.</td></tr>
<tr><td></td><td colspan="3">Distractors</td></tr>
<tr><td></td><td>A</td><td colspan="2">Not the highest.</td></tr>
<tr><td></td><td>C</td><td colspan="2">Buy all VIP tickets.</td></tr>
<tr><td></td><td>D</td><td colspan="2">Higher type of regular tickets.</td></tr>
</table>

<table>
<tr><td rowspan="5">6</td><td>Key</td><td>A</td><td>Marwa will make 12 Mango delight pieces using all the cheese pieces (36 ÷ 3). Therefore, she will need an additional 10 Kg of mangoes (12 - 2).</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>B</td><td colspan="2">Forget the quantity of mangoes Marwa has.</td></tr>
<tr><td>C</td><td colspan="2">Reverse the amount of available mangoes with the amount needed to make one serving of mango delight.</td></tr>
<tr><td>D</td><td colspan="2">Assume that one serving requires only one piece of cheese.</td></tr>
<tr><td rowspan="5">7</td><td rowspan="2">Key</td><td rowspan="2">A</td><td>The below Table shows the price and duration of each trip Susan searched for
<table>
<tr><th>Flight</th><th>Departure Time from Munich Airport</th><th>Arrival Time at Dublin Airport</th><th>Trip Duration</th><th>Price (£)</th></tr>
<tr><td>A</td><td>15:25</td><td>16:55</td><td>2h 30m</td><td>79</td></tr>
<tr><td>B</td><td>11:25</td><td>13:00</td><td>2h 35m</td><td>101</td></tr>
<tr><td>C</td><td>08:25</td><td>09:55</td><td>2h 30m</td><td>111</td></tr>
<tr><td>D</td><td>09:00</td><td>12:10</td><td>4h 10m</td><td>91</td></tr>
<tr><td>E</td><td>09:25</td><td>11:30</td><td>3h 05m</td><td>100</td></tr>
<tr><td>F</td><td>00:10</td><td>02:10</td><td>3h 0m</td><td>95</td></tr>
<tr><td>G</td><td>19:30</td><td>22:00</td><td>3h 30m</td><td>99</td></tr>
</table>
It is evident from the above Table that the flights Susan can travel on are flight A, flight B, and flight F. This means she has only 3 possible flights.</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>B</td><td colspan="2">Calculate trip C among the possible trips and ignore its price.</td></tr>
<tr><td>C</td><td colspan="2">Ignore the time conversion between the two cities when calculating the duration of each trip.</td></tr>
<tr><td>D</td><td colspan="2">Rely on the trip price and ignore its duration.</td></tr>
</table>

<table>
<tr><td>8</td><td>Key</td><td>B</td><td>Hamza wanted to buy a plot of land in a rectangle shape with correct dimensions, so that its area would be 32 m². He built a wooden fence on only three sides at a cost of BD 5 per linear meter. To find the lowest cost, we conduct a systematic search as shown in the table below, where the length of the fence for the three sides is calculated by calculating twice the length of the first side plus the length of the second dimension.

<table>
<tr><th rowspan="2">Area m²</th><th colspan="2">Dimensions m</th><th rowspan="2">Fence length for three sides</th><th rowspan="2">Total fence cost BD</th></tr>
<tr><th>First</th><th>Second</th></tr>
<tr><td>32</td><td>1</td><td>32</td><td>34</td><td>170</td></tr>
<tr><td>32</td><td>2</td><td>16</td><td>20</td><td>100</td></tr>
<tr><td>32</td><td>4</td><td>8</td><td>16</td><td>80</td></tr>
<tr><td>32</td><td>8</td><td>4</td><td>20</td><td>100</td></tr>
<tr><td>32</td><td>16</td><td>2</td><td>34</td><td>170</td></tr>
<tr><td>32</td><td>32</td><td>1</td><td>65</td><td>325</td></tr>
</table>

Based on the above Table, we can observe that the lowest cost is BD 80 for constructing a fence for a garden with dimensions of 4 m × 8 m, where the wall of the house covers the 8 m dimension.</td></tr>
<tr><td></td><td colspan="3">Distractors</td></tr>
<tr><td></td><td>A</td><td colspan="2">Forgetting to double the shorter dimension.</td></tr>
<tr><td></td><td>C</td><td colspan="2">Reversing the dimensions, or considering the dimensions 16 m, 2 m, 2 m.</td></tr>
<tr><td></td><td>D</td><td colspan="2">Forgetting that the fence is for only three sides.</td></tr>
<tr><td>9</td><td>Key</td><td>A</td><td>The column lengths correspond to the given data.</td></tr>
<tr><td></td><td colspan="3">Distractors</td></tr>
<tr><td></td><td>B</td><td colspan="2">Reverse the number of visitors in 2022 with 2023.</td></tr>
<tr><td></td><td>C</td><td colspan="2">Reverse the number of visitors in 2020 with 2021.</td></tr>
<tr><td></td><td>D</td><td colspan="2">Reverse the order of all years.</td></tr>
</table>

10	**Key**	**D**	Based on the model and given data, the format is as follows: The first two digits from the left represent the 17th day: 17 The next two digits from the left represent the month of August: 08 The third two digits from the left represent the sum of the first two digits: 08 (1 + 7) The last two digits from the left represent a whole number multiplied by the first two digits (17) added to the sum of the second two digits (08), resulting in: 15 (1 × 7 + 8 + 0) Hence, the code set by the employee is: 17080815
	Distractors		
	A	Reverse the positions of the month and day.	
	B	Made a mistake in writing the month number.	
	C	Reverse the third two digits and last two digits.	
11	**Key**	**D**	The maximum number of calories Mubarak can lose in one day is when consuming the lowest calories in all his meals, with the highest daily burn and the highest burn from performing additional tasks and exercising at the gym, is 2970 calories. (300 + 420 + 560 + 450 – 2000 – 2700).
	Distractors		
	A	Consider that the maximum number of calories Mubarak can lose in one day is in the scenario of the least daily burn, while consuming the maximum number of calories in all his meals.	
	B	Take the average for all periods.	
	C	Consider that the maximum number of calories Mubarak can lose in one day is when he consumes the maximum calories in all his meals.	
12	**Key**	**A**	Subtracting 8 minutes from 9:22 (because he thinks the clock is 8 minutes late) makes it 9:14. Then subtracting 13 minutes from 9:14 (because it is 13 minutes ahead) makes it 9:01.
	Distractors		
	B	Subtract 13 minutes from 9:22.	
	C	Subtract 8 minutes from 13 minutes and add the result (5) to the time 9:22.	
	D	Add 21 minutes (reverse operations).	

<table>
<tr><td rowspan="6">13</td><td rowspan="2">Key</td><td rowspan="2">C</td><td colspan="2">
<table>
<tr><th>School</th><th>Number of students</th><th>Success rate</th><th>Number of successful students</th></tr>
<tr><td>First</td><td>200</td><td>75%</td><td>150</td></tr>
<tr><td>Second</td><td>150</td><td>80%</td><td>120</td></tr>
<tr><td>Third</td><td>180</td><td>70%</td><td>126</td></tr>
<tr><td>Fourth</td><td>160</td><td>90%</td><td>144</td></tr>
<tr><td>Total</td><td>690</td><td></td><td>540</td></tr>
</table>
Thus, the number of students who passed exams in the four schools is 540 students.
</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Number of failing students in the four schools.</td></tr>
<tr><td>B</td><td colspan="2">Total success rates in the four schools</td></tr>
<tr><td>D</td><td colspan="2">Total number of students in the four schools</td></tr>
<tr><td rowspan="4">14</td><td>Key</td><td>D</td><td>All requirements are met.</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Switching between Tajweed and memorization:</td></tr>
<tr><td>B</td><td colspan="2">The second batch in Tajweed is one-third of the memorization.</td></tr>
<tr><td>C</td><td colspan="2">The fourth batch in Tajweed is more than half.</td></tr>
</table>

<table>
<tr><td rowspan="5">15</td><td>Key</td><td>B</td><td>The fish shop sold two types of shrimp for a total amount of BD 140.000. This means that it sold medium-sized shrimp in multiples of 4 kg (BD 1.750 × 4 = BD 7.000) and large-sized shrimp in multiples of 5 kg (BD 2.200 × 5 = BD 11.000).
If we divide the total amount by the sum of the selling prices, we get (BD 140 ÷ BD 3.95 = 35.44), which gives an average of 35.44 kg. Using systematic search, we find the following as shown in the below Table.
<table><tr><th colspan="2">Shrimp quantity (kg)</th><th colspan="2">Sales Revenue (BD)</th><th rowspan="2">Gross Revenue (BD)</th></tr><tr><th>medium</th><th>large</th><th>medium</th><th>large</th></tr><tr><td>32</td><td>40</td><td>56</td><td>88</td><td>144</td></tr><tr><td>36</td><td>35</td><td>63</td><td>77</td><td>140</td></tr><tr><td>40</td><td>30</td><td>70</td><td>66</td><td>136</td></tr></table>
Based on the above Table, we note that a revenue of BD 140 can be obtained by selling 36 kg of medium-sized shrimp and 35 kg of large sized shrimp.</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Refer to the above Table.</td></tr>
<tr><td>C</td><td colspan="2">The quantity sold of medium-sized shrimp.</td></tr>
<tr><td>D</td><td colspan="2">Refer to the above Table.</td></tr>
<tr><td rowspan="5">16</td><td>Key</td><td>C</td><td>Total price for three boxes of incense, including VAT, is BHD 26.400 (8 × 1.1 × 3).
The amount charged by the company to Fatima for delivering her order is BHD 2.600 (29 - 26.400).</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Consider the delivery cost per box.</td></tr>
<tr><td>B</td><td colspan="2">Only calculate the added value.</td></tr>
<tr><td>D</td><td colspan="2">The added value was not calculated.</td></tr>
<tr><td rowspan="5">17</td><td>Key</td><td>C</td><td>The third hotel meets all of Yaqoub's requirements in terms of its service level, which is no less than 4 stars, its distance from the city center, provision of free service, and the total cost for three nights is the lowest possible ($435).</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">The hotel's service level is less than 4 stars.</td></tr>
<tr><td>B</td><td colspan="2">There is no free service.</td></tr>
<tr><td>D</td><td colspan="2">It meets all the requirements but the total cost is not the lowest possible.</td></tr>
</table>

18	**Key**	**D**	The first printer printed 4200 pages in two hours (700 × 6). The second printer printed 2800 pages in two hours (700 × 4). The third printer printed 3600 pages in two hours (1200 × 3). Total: 10600 pages.
	Distractors		
	A	Number of sheets printed using each printer twice for each rate	
	B	Number of sheets printed in just one hour	
	C	Considering that the third printer printed 700 sheets every 40 minutes	
19	**Key**	**B**	Number of startups for one company must be four times the number of startups in the country with the fewest startups. Number of startups for one company must be three times the number of startups in the country with the fewest startups. Number of startups for one company must be twice Number of startups in the country with the fewest startups.
	Distractors		
	A	See above.	
	C	See above.	
	D	See above.	
20	**Key**	**C**	The largest possible sum for card numbers is 18 for the owner of card No. 99. The sums that are divisible by 7 and less than 18 are only 7 and 14. The cards totalling 7 are: 7, 16, 25, 34, 43, 52, 61, 70 The cards totalling 14 are: 59, 68, 77, 86, 95 Therefore, the number of students participating in the next game is 13.
	Distractors		
	A	Number of cards that add up to 14 only.	
	B	Number of cards that add up to 7 only.	
	D	Number of numbers on the cards that are divisible by 7.	

21	**Key**	**D**	If the number 13 is entered into the programme, the final result of the operations is the number 449 ($13^2 + 21 \times 13 + 7$), which is a prime number as it is not divisible by 7, 13, or 29.
	Distractors		
	A	See above	
	B	See above	
	C	See above	
22	**Key**	**C**	Due to Mahmoud's family circumstances, they cannot travel until 16/6/2024, so the tourist destination to Sri Lanka is not suitable for his family. Since his wife must return at least two days before her work date, the tourist destination to Malaysia is also not suitable for them. whereas Mahmoud desires the longest possible duration for the tourist trip, the destination to Singapore is appropriate. Thus, the amount Mahmoud will pay to the travel agency is: $3 \times 495 + 435 =$ BD 1920
	Distractors		
	A	The cost of a trip to Sri Lanka, but it will be before Mahmoud's son finishes his exams.	
	B	The cost of a trip to Turkey, but it's not the longest.	
	D	The cost of a trip to Malaysia, but Mahmoud's wife won't get two days off before returning to work.	
23	**Key**	**C**	The total cost to purchase a family kebab plate (3.100), two large mixed plates (2×2.400), and a small meat cut plate (1.800) is BD 9.700. Hence, the amount Khalid will get back from the cashier is BD 10.300 (20 - 9.700).
	Distractors		
	A	Considering that Khalid bought two family-sized mixed chicken plates	
	B	Total cost of Khalid's order	
	D	Considering that Khalid bought only one large mixed chicken plate	

<table>
<tr><td rowspan="6">24</td><td>Key</td><td>B</td><td>According to the Authority's model, the bill for consuming 17,560 gallons of water is as follows:

<table><tr><th>Monthly Consumption (gallons)</th><th>Tariff (AED per gallon)</th><th>Monthly Consumption (gallons)</th><th>Bill</th></tr><tr><td>0 - 6000</td><td>0.035</td><td>6000</td><td>210.00</td></tr><tr><td>6001 - 12000</td><td>0.040</td><td>6000</td><td>240.00</td></tr><tr><td>12001- above</td><td>0.046</td><td>5560</td><td>255.76</td></tr></table>
Therefore, the bill amount is AED 705.76.</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Calculate the first tier and the remaining from the second tier.</td></tr>
<tr><td>C</td><td colspan="2">Calculate the average price for the three tiers and multiply it by the number of gallons.</td></tr>
<tr><td>D</td><td colspan="2">Consider the number of gallons to be in the third tier only.</td></tr>
<tr><td rowspan="5">25</td><td>Key</td><td>C</td><td>To increase the number of tools from one tool, we assume that Najwa will spend an amount of BD 120 and will buy the tools at the cheapest prices per tool.

The total amount for purchasing two tools of each type is BD 40 (2 × (3 + 2 + 5 + 10)), leaving BD 80 (120 - 40).

Therefore, Najwa can buy 8 additional pieces (80 ÷ 10),

making a total of 10 pieces (8 + 2).</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Buying the maximum number of the fourth tool with the lowest budget and the highest price per tool.</td></tr>
<tr><td>B</td><td colspan="2">Forgetting to add the two mandatory parts for Najwa.</td></tr>
<tr><td>D</td><td colspan="2">Total number of tools that Najwa will buy.</td></tr>
</table>

<table>
<tr><td rowspan="5">26</td><td>Key</td><td>B</td><td>If Ebrahim wins all the rounds, the total amount he will receive is BD 35.
If he secures draw in all the rounds, the total amount he will receive is BD 14.
By systematically searching to obtain BD 28, we find that:
• Winning 5 rounds and obtaining BD 25, leaving BD 3 in 2 rounds, which is not possible.
• Winning 4 rounds and obtaining BD 20, leaving BD 8 in 3 rounds, which is not possible.
Winning 3 rounds and obtaining BD 15, leaving BD 13 in 4 rounds, which is not possible.</td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Winning 5 rounds and getting BD 25, drawing in one round and getting BD 2, and losing in one round.</td></tr>
<tr><td>C</td><td colspan="2">Winning 5 rounds and receiving BD 25, drawing in 2 rounds and receiving BD 4</td></tr>
<tr><td>D</td><td colspan="2">Winning 6 rounds and receiving BD 30 and losing in one round.</td></tr>
<tr><td rowspan="5">27</td><td>Key</td><td>D</td><td>The below Table shows the profit margins of the four goods for the year 2022
<table><tr><th>Goods</th><th>Profit percentages</th></tr><tr><td>A</td><td>15%</td></tr><tr><td>B</td><td>40%</td></tr><tr><td>C</td><td>15%</td></tr><tr><td>D</td><td>30%</td></tr></table></td></tr>
<tr><td colspan="3">Distractors</td></tr>
<tr><td>A</td><td colspan="2">Profit percentages of the shop in the four goods for the year 2020.</td></tr>
<tr><td>B</td><td colspan="2">Profit percentages of the shop in the four goods for the year 2021.</td></tr>
<tr><td>C</td><td colspan="2">Profit percentages of the shop in the four goods for the year 2023.</td></tr>
</table>

28	**Key**	**B**	By adding 5 students to 8 classrooms, the number of students in the cancelled classrooms is 40 (8 × 5); i.e. the number of students in each class is 20 (40 ÷ 2), hence the total number of students is 200 (20 × 10).
	Distractors		
	A	Since the person in charge has added 5 students to each of the remaining 8 classrooms, then he has redistributed 40 (5 × 8) students. But he has cancelled two classrooms; which means that each class had 20 (40 ÷ 2) students. Accordingly, only 8 classrooms are taken into account, which makes the total number of students 160 (20 × 8).	
	C	Since the person in charge has added 5 students to each of the remaining 8 classrooms, then he has redistributed 40 (5 × 8) students. But he has cancelled two classrooms; which means that each class had 20 (40 ÷ 2) students. By adding 5 students, each class will have 25 students and 10 classes are taken into account, which makes the total number of students 250 (10 × 25).	
	D	Since the person in charge has added 5 students to each of the remaining 8 classrooms, then he has redistributed 40 (5 × 8) students. Accordingly, 10 classes are taken into account, which makes the total number of students 400 (40 × 10).	
29	**Key**	**C**	From the figure, it is clear that the third-place prize is twice the fourth-place prize, so the third-place prize will be (300 × 2) BD 600. It is also clear from the figure that the second-place prize equals the sum of the third and fourth-place prizes, so the second-place prize will be (600 + 300) BD 900. It is also clear from the figure that the first-place prize equals the sum of the prizes for the other three places, which is BD 1800 (300 + 600 + 900).
	Distractors		
	A	See above.	
	B	See above.	
	D	Total of the four prizes.	

30

Key | **A**

The below Table shows Mohammed's cumulative points at the end of each of the six rounds.

Round	Round points	Cumulative points at the end of the round
1	18	18
2	7	25
3	24	49
4	5	54
5	24	78
6	16	94

Distractors

B	Calculating round points without applying the principle of even and odd numbers.
C	Reversing the conditions of even and odd numbers in calculating the points for each round.
D	Applying the conditions of even and odd numbers based on the sum of the two visible numbers, whether it is even or odd, and not based on the numbers themselves being even or odd.

31

Key | **B**

Eman's balance is calculated every month by subtracting the withdrawn amount from the total of her monthly salary plus the previous month's balance. Points are calculated by dividing the monthly balance (provided it is not less than BD 300) by 10 and removing the decimal fractions.
The below Table shows Eman's balance for each month along with the points she earned:

Month	Total amounts withdrawn (BD)	Balance (BD)	Points
July	8000	285	0
August	971	368	36
September	1122	300	30
October	917	437	43
November	833	658	65
December	960	752	75
Total points			**249**

Distractors

A	Excluding the points for September as the balance is BD 300.
C	Adding an extra point for amounts less than BD 10.
D	Disregarding the condition for earning monthly points for July as Eman's balance was less than BD 300.

32	**Key**	**B**	If Hamad ships his boxes in one shipment, the cost will be BD 65 (25 + 5 × 8). If Hamad ships his boxes in two shipments, the cost will be BD 60 (25 + 25 + 5 × 2). If Hamad ships his boxes in three shipments, the cost will be BD 75.
	Distractors		
	A	To ship the boxes in two shipments without calculating additional shipping costs.	
	C	See above	
	D	See above	
33	**Key**	**B**	To achieve the lowest passing grade, the lowest test score must be replaced, and the final exam score will count as one and a half times the total grade. Therefore, the minimum score Yasser needs to obtain in the final exam to pass the course is 28 marks. ((60 - 18) ÷ 1.5)
	Distractors		
	A	It is not possible to achieve the passing grade.	
	C	The minimum grade Ahmed must achieve in the final exam to pass the course without the substitution system.	
	D	The total minimum score Ahmed needs to achieve in the final exam to pass the course, including the substituted grade for the first test.	
34	**Key**	**C**	Since the ratio of the number of male students to female students in the private school is 15:16, i.e. the number of students is a multiple of 31 (15 + 16). The number that is a multiple of 31 and falls between 1220 and 1250 is 1240. Therefore, the number of female students is 640. $(1240 \times \frac{16}{31})$
	Distractors		
	A	Number of male students this year.	
	B	Considering that the total number of students is 1209.	
	D	Considering that the total number of students is 1271.	

<table>
<tr><td>35</td><td>Key</td><td>C</td><td>The below Table shows the total number of rooms in each hotel along with the total rental price for a week.

<table><tr><th>Hotel</th><th>Total number of rooms</th><th>Total rental price for a week ($)</th></tr><tr><td>A</td><td>77</td><td>21560</td></tr><tr><td>B</td><td>92</td><td>32200</td></tr><tr><td>C</td><td>59</td><td>18585</td></tr><tr><td>D</td><td>70</td><td>26950</td></tr><tr><td>E</td><td>86</td><td>36120</td></tr><tr><td>F</td><td>99</td><td>27720</td></tr><tr><td>G</td><td>106</td><td>37100</td></tr></table>
The hotels with an even number of rooms are: Hotel B, Hotel D, Hotel E, Hotel G
The total amount paid to rent these hotels for a week is:
$32200 + $26950 + $36120 + $37100 = $132370</td></tr>
<tr><td></td><td colspan="3">Distractors</td></tr>
<tr><td></td><td>A</td><td colspan="2">The cost of renting hotels for one night.</td></tr>
<tr><td></td><td>B</td><td colspan="2">Calculate the total number of rooms for each hotel by multiplying the number of floors indicated in the Table (without subtracting the last floor) by the number of rooms per floor, then adding the number of rooms on the last floor. Then calculate the total price for hotels with an even total number of rooms.</td></tr>
<tr><td></td><td>D</td><td colspan="2">Calculate the total number of rooms for each hotel by multiplying the number of floors mentioned in the table (without subtracting the last floor) by the number of rooms per floor, then calculate the total price for hotels with an even total number of rooms.</td></tr>
</table>

36	**Key**	**C**	Shaker can place 4 boxes lengthwise (5.2 ÷ 1.1), and 2 boxes widthwise (2.7 ÷ 1.1), and only 2 boxes on top of each other. Therefore, the number of boxes that can be placed in the truck at one time is 16 boxes. However, due to the maximum load weight of the truck, Shaker can carry a maximum of 15 boxes (15 x 130 = 1950). Consequently, the number of trips the truck will make between the factory and the shop is 11 trips going and 10 trips returning, with a total of 21 trips. The minimum distance is 420 Kg (20 x 21)
	Distractors		
	A	The shortest distance without considering conditions.	
	B	The shortest distance without considering the maximum weight the truck will carry.	
	D	Adding the return distance between the shop and the factory after transporting the last quantity of boxes.	
37	**Key**	**A**	All requirements are met.
	Distractors		
	B	The speed of the first car did not stabilize in the first 5 seconds.	
	C	The speed of the second car increased, while the speed of the first one decreased in the last 5 seconds.	
	D	Speed is changed between the two cars.	

38

Key **C**

The average of the cheapest group to the total amount is 7 (280 ÷ 40). By systematically searching for the amount of BD 280 from the cheapest group with a count of 6, we find the following:

Number of Pieces	Amount	Category One 50	Category Two 45	Category Three 40
27	285	0	1	6
23	245	0	1	5
26	290	0	2	5
25	295	0	3	4
22	250	0	2	4
24	300	0	4	3
21	255	0	3	3
23	305	0	5	2
20	260	0	4	2
22	310	0	6	1
19	265	0	5	1
19	325	2	5	0
17	275	1	5	0
18	330	3	4	0
16	280	2	4	0
17	335	4	3	0
15	285	3	3	0
14	290	4	2	0
12	240	3	2	0
13	295	5	1	0
11	245	4	1	0
16	280	4	0	2

Accordingly, Ammar bought two sets of the first type and four sets of the second type for a total of BD 280. The number of pieces is 16 (2 × 2 + 4 × 3).
Alternatively, Ammar might have bought four sets of the first type and two sets of the third type, totaling BD 280. The number of pieces is 16 (4 × 2 + 2 × 4).

Distractors

A	Number of possible sets that Ammar bought.
B	Total amount is BD 290.
D	Purchasing only from the third category.

39	**Key**	**A**	The drawing matches the levels of change.
	Distractors		
	B	The percentages were presented directly without calculating the ratios	
	C	Opposite the levels of change between white sugar and white flour	
	D	Changing the levels from the original consumption.	
40	**Key**	**C**	The cost of the first product is BD 129 (115 + 11 + 3), so Haitham will set his profit at BD 38.700 (129 × 0.3). The cost of the second product is BD 116 (103 + 9 + 4), so Haitham will set his profit at BD 34.800 (116 × 0.3). The cost of the third product is BD 96 (81 + 10 + 5), so Haitham will set his profit at BD 28.800 (96 × 0.3). Since the profit percentage is fixed, the highest profit will be achieved by spending the most amount of money. The highest profit will be achieved by importing and selling two pieces of the first product and one piece of the third product, costing BD 354 (129 × 2 + 96), with a profit of BD 106.200.
	Distractors		
	A	Import and sell only one piece of each product.	
	B	The highest profit from importing and selling only one product, which is the second product.	
	D	Import and sell one piece of the first product, and two pieces of the second product, at a cost of BD 361 (129 + 116 × 2), with a profit of BD 108.300.	