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## Grade 6 Mathematics End-of-Term Exam Review 1

Grade	6	Student Learning Outcome(s)	6.sp.1, 6.sp.2, 6.sp.5, 6.sp.8, 6.sp.10
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Student Name		Class		Date	
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### Calculator Allowed

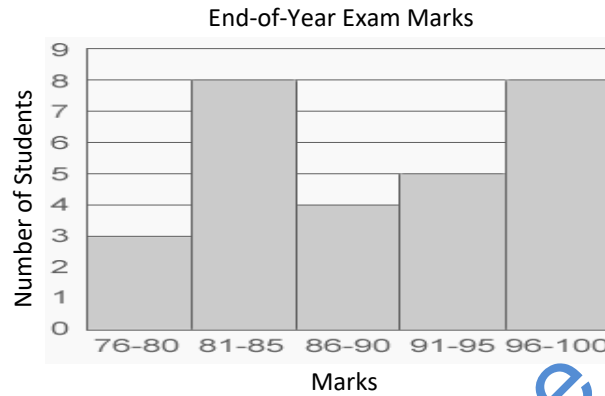
1	Which statement is true about the two dot plots below	
	A	Both have the same mode.
	B	Both have the same mean.
	C	Both have the same median.
D	Both have the same range.	

2	In Mr. Harun's class, the number of books students read in one week is shown in dot plot below.	
	<p>Books read in a Week</p>	
	Which statement is true about the dot plot above?	
	A	50% of the students read more than 6 books.
	B	50% of the students read less than 4 books.
C	50% of the students read more than 9 books.	
D	50% of the students did read books.	



## Grade 6 Mathematics End-of-Term Exam Review 1

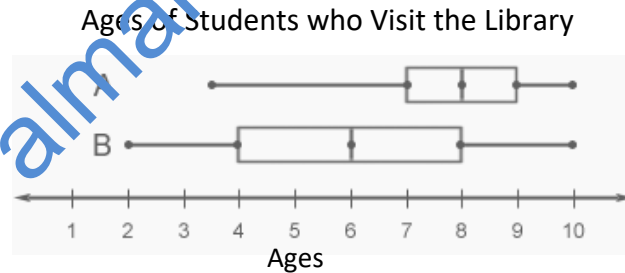
The end-of-year exams marks of a G6 class are shown in the histogram below.



Which marks interval has the same number of students as 96%-100%?

- |   |         |
|---|---------|
| A | 76%-80% |
| B | 81%-85% |
| C | 86%-90% |
| D | 91%-95% |

The ages of children who visit two libraries are shown in the box plot below.



Which statement is true about the box plot above?

- |   |  |
|---|--|
| A | The maximum age is less for library A than library B.    |
| B | The maximum age is greater for library A than library B. |
| C | The maximum age is the same for library A and library B. |
| D | Library A and library B don't have maximum ages.         |



## Grade 6 Mathematics End-of-Term Exam Review 1

5 The box plot shows the marks of students in two tests.

What is the minimum mark in test A?

A	20
B	24
C	30
D	36

6 Which measure of **center** is appropriate to describe the data set?

A	mean
B	cluster
C	median
D	range

7 The marks of students in G6-A and G6-B are shown in the data sets below.

G6-A: {10, 7, 12, 6, 14, 25, 10, 5, 1}  
G6-B: {10, 6, 11, 6, 12, 10, 6, 4, 7}

Which of the following is true about the spread (range) of the data sets above?

A	The marks for G6-A are more spread out than G6-B.
B	The marks for G6-B are more spread out than G6-A.
C	The marks for G6-A and G6-B are equally spread out.
D	Both G6-A and G6-B don't have spread in their marks.



## Grade 6 Mathematics End-of-Term Exam Review 1

8 What is the median of data displayed below?

Amount of Sleep

Time (hours)

A	7.5 hours
B	8 hours
C	8.5 hours
D	9 hours

9 G6 students collected data about the smartphones they are using. The data is shown in the histogram below.

Length of Smartphones (cm)

Which statistical question did they use for the survey?

A	How many smartphones are used by G6 students?
B	What are the lengths of the smartphones used by G6 students?
C	What are the lengths of the computers used by G6 students?
D	What is the length of the smartphone used Jassim?

10 The table shows the time 5 students spent to complete a test.

Name	Rahseed	Khalid	Osama	Mohammad	Ahmed
Time (min.)	8.5	10.2	3.25	5.75	8

Find the mean time for the data set.

A	3.25
B	7.14
C	8
D	10.2



## Grade 6 Mathematics End-of-Term Exam Review 1

### Student Self-Reflection

<p>What do you think you can <u>and</u> cannot do?</p>	<p><i>One thing I can do is...</i></p> <p><i>One thing I cannot do is...</i></p>
<p>What will your focus be for improvement?</p>	<p><i>I need to improve on...</i></p>
<p>How will you make the improvement(s)?</p>	<p><i>I will make this improvement by...</i></p>

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## Grade 6 Mathematics End-of-Term Exam Review 1

### Answer Key

Q1	D
Q2	A
Q3	B
Q4	C
Q5	B
Q6	C
Q7	A
Q8	C
Q9	B
Q10	B

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## Grade 6 Mathematics End-of-Term Exam Review 2

<b>Grade</b>	<b>6</b>	<b>Student Learning Outcome(s)</b>	6.ee.3, 6.ee.4, 6.ee.5, 6.ee.7, 6.ee.8, 6.ee.11, 6.ee.12, 6.ee.15, 6.ee.16, 6.ee.18
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<b>Student Name</b>		<b>Class</b>		<b>Date</b>	
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### Calculator Allowed

<b>1</b>	Evaluate this expression below.	
	$12 \times (3 + 2)^2 \div 2 - 10$	
	<b>A</b>	14.5
	<b>B</b>	25
	<b>C</b>	50
<b>D</b>	140	

<b>2</b>	What is the value of $4 - 2b^2 + 3c$ , when $b = 2$ and $c = -1$ ?	
	<b>A</b>	-7
	<b>B</b>	-3
	<b>C</b>	7
	<b>D</b>	15

<b>3</b>	Write an algebraic expression for the statement below.	
	<i>seven less than a number</i>	
	<b>A</b>	$7 - n$
	<b>B</b>	$n - 7$
	<b>C</b>	$7n$
<b>D</b>	$7 + n$	

<b>4</b>	Choose the correct equivalent expression for the expression below.	
	$r + 3 + 5r + 9$	
	<b>A</b>	$4r + 12$
	<b>B</b>	$6r + 9$
	<b>C</b>	$6r + 12$
<b>D</b>	$3(2r + 3)$	





## Grade 6 Mathematics End-of-Term Exam Review 2

5	Which value of $x$ will make the $3 + x = 27$ true?	
	A	33
	B	30
	C	24
D	17	

6	Solve $\frac{3}{5}d = 15$ .	
	A	6.6
	B	7
	C	9
D	25	

7	Jawahir makes sales to her manager each day. Her sales for today was twice of her sales for yesterday. She made total sales of AED 350 today. How much is her sales yesterday?	
	A	AED 175
	B	AED 350
	C	AED 352
D	AED 700	

8	Choose the number from the following set of numbers that will make the inequality $k - 3 > 20$ true.	
	{19, 21, 23, 25}	
	A	19
	B	21
C	23	
D	25	



## Grade 6 Mathematics End-of-Term Exam Review 2

9

Select a graph that matches the relation  $y = 3x$ .

**A**

**B**

**C**

**D**

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10

Which of the following graphs represents  $x \leq 6$ .

**A**

**B**

**C**

**D**

Total Marks

/5



## Grade 6 Mathematics End-of-Term Exam Review 2

### Student Self-Reflection

<p>What do you think you can <u>and</u> cannot do?</p>	<p><i>One thing I can do is...</i></p> <p><i>One thing I cannot do is...</i></p>
<p>What will your focus be for improvement?</p>	<p><i>I need to improve on...</i></p>
<p>How will you make the improvement(s)?</p>	<p><i>I will make this improvement by...</i></p>



## Grade 6 Mathematics End-of-Term Exam Review 2

### Answer Key

Q1	D
Q2	A
Q3	B
Q4	C
Q5	C
Q6	D
Q7	A
Q8	D
Q9	A
Q10	D

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## Grade 6 Mathematics End-of-Term Exam Review 3

Grade	6	Student Learning Outcome(s)	6.g.1, 6.g.3, 6.g.4, 6.g.6, 6.g.8
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Student Name		Class		Date	
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### Calculator Allowed

1 Find the area of the figure below. The figure is not drawn to scale.

A

A	51 cm <sup>2</sup>
B	54 cm <sup>2</sup>
C	57 cm <sup>2</sup>
D	72 cm <sup>2</sup>

2 Find the area of the figure below. The figure is not drawn to scale.

A

A	32 m <sup>2</sup>
B	22 m <sup>2</sup>
C	26 m <sup>2</sup>
D	16 m <sup>2</sup>



## Grade 6 Mathematics End-of-Term Exam Review 3

3	Find the area of the triangle below. The figure is not drawn to scale.	
	A	13 m <sup>2</sup>
	B	20 m <sup>2</sup>
	C	40.5 m <sup>2</sup>
D	80 m <sup>2</sup>	

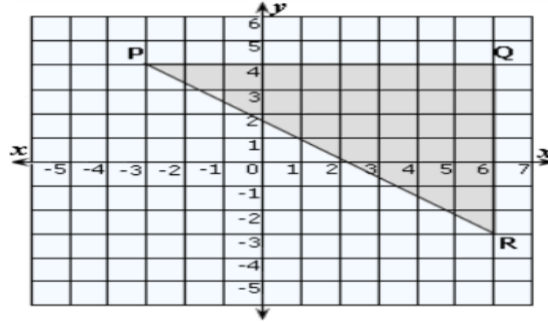
4	Three coordinates of a rectangle are shown on the graph below.	
	What are the coordinates of the fourth vertex?	
	A	(-3, -3)
	B	(-3, 3)
C	(-3, 5)	
D	(3, -3)	



## Grade 6 Mathematics End-of-Term Exam Review 3

5

On a map, **Village P** is at  $(-3, 4)$ . **Village Q** is at  $(6, 4)$ , and **Village R** is at  $(6, -3)$ .

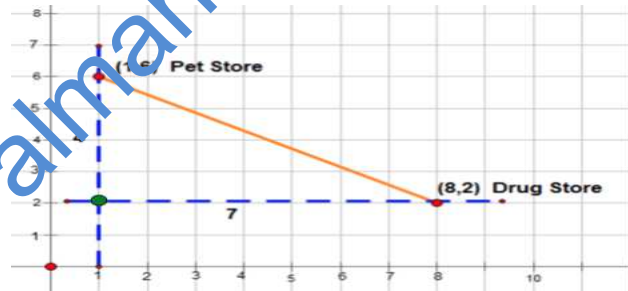


What is the distance from the Village Q to Village R in km? Each 1 unit distant is 1 km.

- A 7 km
- B 8 km
- C 9 km
- D 16 km

6

On the graph below, the grocery store is located at the third coordinate.



What are the coordinates of the grocery store?

- A  $(0, 2)$
- B  $(1, 2)$
- C  $(4, 7)$
- D  $(7, 4)$



## Grade 6 Mathematics End-of-Term Exam Review 3

7	A rectangular prism has length 4 m, width $\frac{1}{4}$ m, and height 3 m. Find the volume of the rectangular prism.	
	A	$1.5 \text{ m}^3$
	B	$3 \text{ m}^3$
	C	$7.25 \text{ m}^3$
D	$48 \text{ m}^3$	

8	What is the volume of the rectangular prism below? The figure is not drawn to scale.	
	A	$8 \text{ cm}^3$
	B	$9 \text{ cm}^3$
	C	$18 \text{ cm}^3$
	D	$36 \text{ cm}^3$

9	The net of rectangular prism is shown below.	
	Find the surface area. The figure is not drawn to scale.	
	A	$44 \text{ cm}^2$
	B	$48 \text{ cm}^2$
	C	$64 \text{ cm}^2$
D	$88 \text{ cm}^2$	





## Grade 6 Mathematics End-of-Term Exam Review 3

10	The net of triangular pyramid is shown below.	
	Find the surface area. The figure is not drawn to scale.	
	A	180 cm <sup>2</sup>
	B	144 cm <sup>2</sup>
C	108 cm <sup>2</sup>	
D	24 cm <sup>2</sup>	

Total Marks	/10
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### Student Self-Reflection

What do you think you can <u>and</u> cannot do?	One thing I can do is...  One thing I cannot do is...
What will your focus be for improvement?	I need to improve on...
How will you make the improvement(s)?	I will make this improvement by...



## Grade 6 Mathematics End-of-Term Exam Review 3

### Answer Key

Q1	B
Q2	C
Q3	B
Q4	D
Q5	A
Q6	B
Q7	B
Q8	D
Q9	D
Q10	A

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## Grade 6 Mathematics End-of-Term Exam Review 4

<b>Grade</b>	<b>6</b>	<b>Student Learning Outcome(s)</b>	6.ee.3, 6.ee.4, 6.ee.5, 6.ee.7, 6.ee.8, 6.ee.11, 6.ee.12, 6.ee.15, 6.ee.16, 6.ee.18
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<b>Student Name</b>		<b>Class</b>		<b>Date</b>	
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### Calculator Allowed

<b>1</b>	Solve $x + 4 = 8$ .	
	<b>A</b>	$x = 2$
	<b>B</b>	$x = 4$
	<b>C</b>	$x = 12$
	<b>D</b>	$x = 32$

<b>2</b>	Solve $x - 2 = 6$	
	<b>A</b>	$x = 3$
	<b>B</b>	$x = 4$
	<b>C</b>	$x = 8$
	<b>D</b>	$x = 12$

<b>3</b>	Solve $2x = 10$ .	
	<b>A</b>	$x = 5$
	<b>B</b>	$x = 8$
	<b>C</b>	$x = 12$
	<b>D</b>	$x = 20$

<b>4</b>	Solve $\frac{x}{3} = 9$ .	
	<b>A</b>	$x = 3$
	<b>B</b>	$x = 6$
	<b>C</b>	$x = 12$
	<b>D</b>	$x = 27$



## Grade 6 Mathematics End-of-Term Exam Review 4

5	Challenge: Solve $2x + 6 = 12$ .	
	A	$x = 3$
	B	$x = 9$
	C	$x = 12$
	D	$x = 36$

6	What is the value of the expression $3p-2$ when $p=7$ ?	
	A	28
	B	21
	C	19
	D	12

7	What is the value of the expression below?	
	$3^4 + 9$	
	A	21
	B	39
	C	43
D	90	

8	What is the value of the expression below when $c=5$ and $d=4$ ?	
	$6c^2 - 5d + 8$	
	A	48
	B	79
	C	138
D	888	

9	Which expression is equivalent to $12x-3y+x+x$ ?	
	A	$7x$
	B	$17x$
	C	$10x-3y$
	D	$14x-3y$



## Grade 6 Mathematics End-of-Term Exam Review 4

10	Which of the following is true when $x=12$ ?	
	A	$2x < 8$
	B	$x + 12 < 2$
	C	$x - 7 > -2$
	D	$\left(\frac{x}{4}\right) < 3$

11	Which of the following is true when $x = - 4$ ?	
	A	$3x < 0$
	B	$x + 7 < 2$
	C	$x - 7 > -2$
	D	$\left(\frac{x}{4}\right) > 0$

12	Which expression below is equivalent to $5(g+2)$ ?	
	A	$5g + 2$
	B	$5g + 10$
	C	$g + 2$
	D	$g + 6$

13	Match the phrase with the algebraic expression, equation, or inequality it describes.	
	<i>h is greater than 13</i>	
	A	$h=13$
	B	$h<13$
	C	$h>13$
	D	$h+13$

14	Match the phrase with the algebraic equation or inequality it describes:	
	h is equal to thirteen	
	A	$h=13$
	B	$h<13$
	C	$h>13$
	D	$h+13$



## Grade 6 Mathematics End-of-Term Exam Review 4

15	Match the phrase with the simplified algebraic expression, equation, or inequality it describes.	
	<i>h is less than 9</i>	
	A	$h = 9$
	B	$h > 9$
	C	$h < 9$
D	$h + 9$	

16	Which of the following inequalities matches the number line shown below?	
	A	$2x \leq 20$
	B	$x - 3 \leq 15$
	C	$\frac{x}{3} \geq 6$
D	$x + 7 \geq 17$	

17	Which of the following inequalities matches the number line shown below?	
	A	$2x < 12$
	B	$x - 3 < 6$
	C	$\frac{x}{3} > 3$
D	$x + 7 \geq 16$	

18	Match the data in the graph with the corresponding equation.	
	A	$y = 3x - 9$
	B	$y = 9x - \frac{1}{3}$
	C	$y = \frac{1}{3}x - 9$
D	$y = 9x - 3$	



## Grade 6 Mathematics End-of-Term Exam Review 4

19	At a restaurant, Mohammed and his three friends decided to divide the bill evenly. If each person paid AED 38, then what was the total bill?	
	A	AED 12.67
	B	AED 19
	C	AED 76
D	AED 114	

20	Last week Hana ran 30 kilometers more than Fatima. Fatima ran 47 kilometers. How many kilometers did Hana run?	
	A	1.567 km
	B	17 km
	C	77 km
D	1410 km	

**Total Marks**

/20

### Student Self-Reflection

What do you think you can <u>and</u> cannot do?	<i>One thing I can do is...</i>
	<i>One thing I cannot do is...</i>
What will your focus be for improvement?	<i>I need to improve on...</i>
How will you make the improvement(s)?	<i>I will make this improvement by...</i>



## Grade 6 Mathematics End-of-Term Exam Review 4

### Answer Key

Q1	B
Q2	C
Q3	A
Q4	D
Q5	A
Q6	C
Q7	D
Q8	C
Q9	D
Q10	C
Q11	A
Q12	B
Q13	C
Q14	A
Q15	C
Q16	A
Q17	C
Q18	C
Q19	D
Q20	C

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## Content and Skills Assessment 1

Grade	6	Student Learning Outcome(s)	6.g.5, 6.g.6, 6.g.7, and 6.g.8
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Student Name		Class		Date	
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**CALCULATOR NOT ALLOWED**

1

Choose the three-dimensional figure whose net is shown on the left.

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2

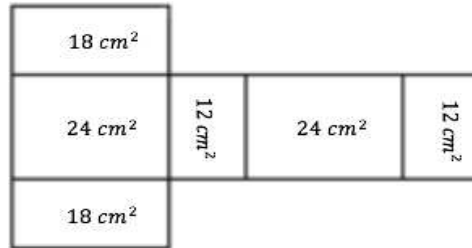
The figure below contains cubes each with side length of  $\frac{1}{2}$  cm. Calculate the volume of the entire figure?



### Content and Skills Assessment 1

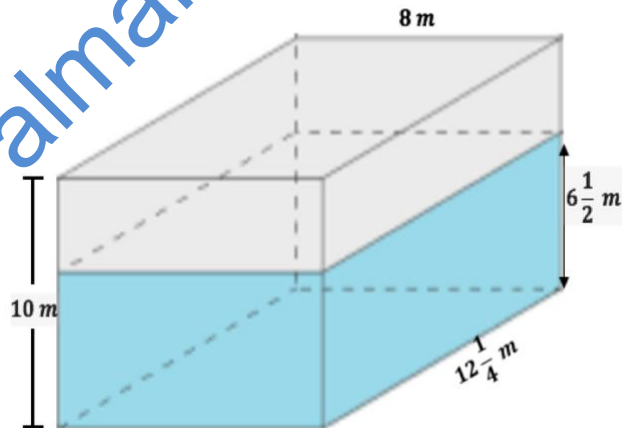
3

The figure below is the net of a rectangular prism. The area of each face is shown below. Calculate the dimensions (length, width, and height) of the rectangular prism.



4

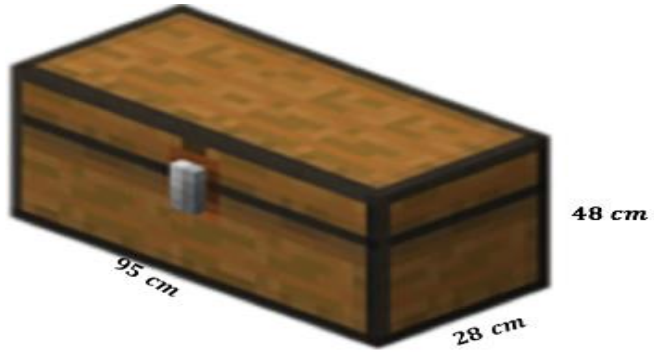
The water tank below is initially filled with water to the height of  $6\frac{1}{2} \text{ m}$ . How much more water will the tank hold before it over flows?





## Content and Skills Assessment 1

Jassim is painting the toy chest below, including the bottom. What is the surface area that he will paint?

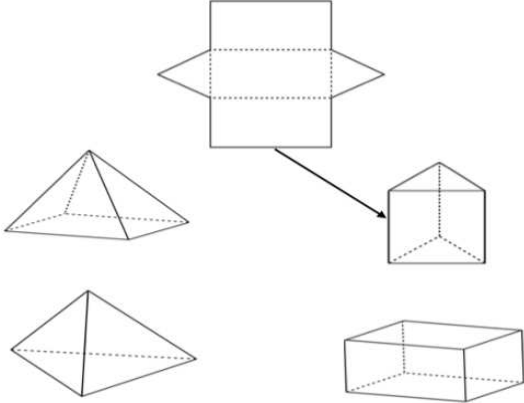
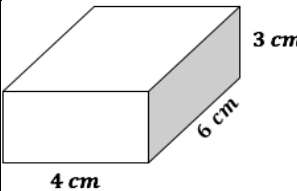


Total Marks	/25
Percentage	/100%



## Content and Skills Assessment 1

### Answer Key

<p><b>Q1</b></p>	<p>correct match [1 mark]</p>	 <p style="text-align: right;">/1</p>
<p><b>Q2</b></p>	<p><math>l = 2\frac{1}{2} \text{ cm}</math> [1 mark]  <math>w = 2\frac{1}{2} \text{ cm}</math> [1 mark]  <math>h = 2\frac{1}{2} \text{ cm}</math> [1 mark]                      All three are multiplied correctly. [1 mark]  <math>\frac{125}{8} \text{ cm}^3</math> [1 mark]  <math>\text{cm}^3</math> in final answer [1 mark]</p>	<p>5 cubes are stacked along the length, so <math>l = 2\frac{1}{2} \text{ cm}</math>                      5 cubes are stacked along the width, so <math>w = 2\frac{1}{2} \text{ cm}</math>                      5 cubes are stacked along the height, so <math>h = 2\frac{1}{2} \text{ cm}</math>  <math>v = 2\frac{1}{2} \text{ cm} \times 2\frac{1}{2} \text{ cm} \times 2\frac{1}{2} \text{ cm}</math>  <math>= \frac{125}{8} \text{ cm}^3</math> OR <math>15\frac{5}{8} \text{ cm}^3</math>                      showing <math>\text{cm}^3</math> (unit measure for volume)</p> <p style="text-align: right;">/6</p>
<p><b>Q3</b></p>	<p><math>6 \text{ cm} \times 3 \text{ cm}</math> [1 mark]  <math>6 \text{ cm} \times 4 \text{ cm}</math> [1 mark]  <math>3 \text{ cm} \times 4 \text{ cm}</math> [1 mark]  <math>l = 6 \text{ cm}, w = 4 \text{ cm},</math>  <math>h = 3 \text{ cm}</math> [2 marks]  <math>\text{cm}</math> in final answer [1 mark]</p>	<p>Note: From the pattern of the net, <math>18 \text{ cm}^2</math> and <math>24 \text{ cm}^2</math> should have <u>one</u> dimension in common. Likewise, <math>24 \text{ cm}^2</math> and <math>12 \text{ cm}^2</math> should have <u>one</u> dimension in common.</p> <p>Area of rectangle <math>18 \text{ cm}^2</math>  <math>l = 6 \text{ cm}</math> <math>w = 3 \text{ cm}</math>  <math>18 \text{ cm}^2 = 6 \text{ cm} \times 3 \text{ cm}</math>                      Area of rectangle <math>24 \text{ cm}^2</math>  <math>l = 6 \text{ cm}</math> <math>w = 4 \text{ cm}</math>  <math>24 \text{ cm}^2 = 6 \text{ cm} \times 4 \text{ cm}</math>                      Area of rectangle <math>12 \text{ cm}^2</math>  <math>l = 4 \text{ cm}</math> <math>w = 3 \text{ cm}</math>  <math>12 \text{ cm}^2 = 3 \text{ cm} \times 4 \text{ cm}</math></p>  <p style="text-align: right;"><b>OR</b> <math>l = 6 \text{ cm}, w = 4 \text{ cm}, h = 3 \text{ cm}</math></p> <p style="text-align: right;">/6</p>



## Content and Skills Assessment 1

<p><b>Q4</b></p>	<p><math>10 m - 6\frac{1}{2} m</math> [1 mark: finding difference of heights]</p> <p><math>12\frac{1}{4} m \times 8 m \times 3\frac{1}{2} m</math> [2 marks: multiplication and using the difference]</p> <p><math>49 \times 7</math> [1 mark: correct simplification]</p> <p><math>343 m^3</math> [1 mark]</p> <p><math>m^3</math> in final answer [1 mark]</p>	<p>Difference in height: <math>10 m - 6\frac{1}{2} m = 3\frac{1}{2} m</math></p> <p><math>v = 12\frac{1}{4} m \times 8 m \times 3\frac{1}{2} m</math> <math>= 49 \times 7</math></p> <p>additional amount of water before overflow: <math>343 m^3</math></p> <p><b>OR</b></p> <p>Volume when height is <math>6\frac{1}{2} m</math>:</p> <p><math>v = 12\frac{1}{4} m \times 8 m \times 6\frac{1}{2} m</math> <math>= 49 \times 13 m^3</math> <math>= 637 m^3</math></p> <p>Volume when height is <math>10 m</math>:</p> <p><math>v = 12\frac{1}{4} m \times 10 m \times 8 m</math> <math>= 49 \times 10 \times 2</math> <math>= 980 m^3</math></p> <p>Additional amount of water before overflow: <math>980 m^3 - 637 m^3 = 343 m^3</math></p> <p style="text-align: right;">/6</p>
<p><b>Q5</b></p>	<p><math>2(95 \times 28)</math> [1 mark: multiplication using correct factors]</p> <p><math>2(95 \times 48)</math> [1 mark: multiplication using correct factors]</p> <p><math>2(48 \times 28)</math> [1 mark: multiplication using correct factors]</p> <p><math>5,320 + 9,120 + 2,688</math> [1 mark]</p> <p><math>17,128 cm^2</math> [1mark]</p> <p><math>cm^2</math> in final answer [1 mark]</p>	<p>Surface Area of the rectangular prism</p> <p><math>2(95 \times 28) cm^2 + 2(95 \times 48) cm^2 + 2(48 \times 28) cm^2 =</math> <math>5,320 + 9,120 + 2,688 = 17,128 cm^2</math></p> <p style="text-align: right;">/6</p>



## Content and Skills Assessment 1

# Question Analysis Information

Use the information below to help you determine which student learning outcomes are not being met by the majority of your students. This will help you make determinations about re-teaching, spiraling content not mastered, and implementing other interventions without interrupting the scheme of work.

Question	Student Learning Outcome(s)
1	<b>6.g.7 Represent</b> three-dimensional figures using nets made of rectangles and triangles.
2	<b>6.g.5 Calculate</b> the volumes of right rectangular prisms with fractional side lengths using models. <b>6.g.6 Solve</b> real-world and mathematical problems involving volumes of right rectangular prisms with fractional edge lengths using $V = lwh$ and $V = Bh$ .
3	<b>6.g.8 Solve</b> real-world problems involving surface areas of three-dimensional figures by using nets of rectangles and triangles.
4	<b>6.g.6 Solve</b> real-world and mathematical problems involving volumes of right rectangular prisms with fractional edge lengths using $V = lwh$ and $V = Bh$ .
5	<b>6.g.8 Solve</b> real-world problems involving surface areas of three-dimensional figures by using nets of rectangles and triangles.



## Content and Skills Assessment 2

Grade	6	Student Learning Outcome(s)	6.sp.1 - 6.sp.10
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Student Name		Class		Date	
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### **Selected Response: CALCULATOR NOT ALLOWED**

1

The students in G6-A were surveyed on Thursday. The data is displayed in the dot plot below.

**Books Carried to School**

What was the statistical question for the survey?

A	How many books did G6-A students read on Thursday?
B	How many books were in the school library on Thursday?
C	How many books did Jassim in G6-A carry to school on Thursday?
D	How many books did G6-A students carry to school on Thursday?

2

The hours spent by G6-B students practicing the piano last week is shown in the histogram below.

**Piano Practice**

Which time interval was most practiced by the students?

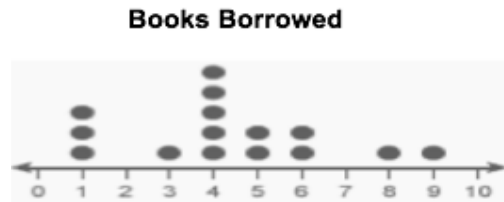
A	3-5 hours
B	6-8 hours
C	9-11 hours
D	12-14 hours



## Content and Skills Assessment 2

3

The dot plot shows the number of books borrowed by the students in Mr. Hussain's grade 6 class.

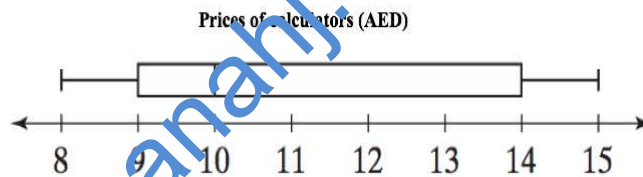


How many students borrowed more than 4 books?

- A 5
- B 6
- C 8
- D 9

4

The box plot below shows the costs of calculators found in different stores in Dubai.



According to the box plot above, which of the following statements is false?

- A The median is AED 9.
- B The minimum price is AED 8.
- C The maximum price is 15 AED.
- D The upper quartile is 14 AED.

5

When a data set has an outlier, it is advisable to use the mean to describe the center.

- A True
- B False





## Content and Skills Assessment 2

6 Which word correctly describes the data shown on the number 18 in the dot plot below?

Computer Games

A	gap
B	cluster
C	peak
D	outlier

7 The number of food orders from a restaurant are shown in the two displays below. Which display allows you to tell the mode of the data?

A

Food Orders

B

Food Orders

8 The number of goals scored by the boys' soccer team in 6 games is shown in dot plot below.

Goals Scored by Boys Team

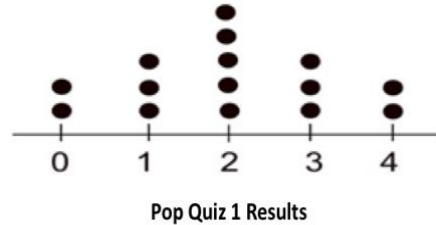
A	3
B	7
C	18
D	54



## Content and Skills Assessment 2

9

The dot plot below shows the science pop quiz results of a 7<sup>th</sup> grade class at a school.

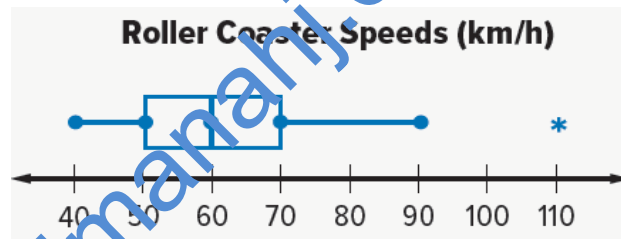


Which of the following is true about the dot plot above?

- A mean < median < mode
- B mean > median > mode
- C mean = median = mode
- D mean < median > mode

10

Which of the following is true about the box plot below?



- A The outlier is 110.
- B The mode is 100.
- C The range is 60.
- D The median is 70.



## Content and Skills Assessment 2

### Constructed Response: CALCULATOR ALLOWED

11

The grades of students in G6-A and G6-B are shown in the data sets below.

G6-A: {10, 7, 12, 6, 14, 25, 10, 5, 1}

G6-B: {10, 6, 11, 6, 12, 15, 6, 4, 2}

Compare the means of the two data sets above.

12

The savings of 10 friends are shown in the data set below. All amounts are in AED.

{10, 10, 20, 20, 30, 30, 30, 40, 50, 60}

Complete the table below using the data above.

minimum savings	
median	
range	
mode	



## Content and Skills Assessment 2

### Matching Response: CALCULATOR ALLOWED

In sets A, B, C, D, and E, the arrows show specific data values. Match the words on the right to the values indicated by the arrows.

A:	$1, 1, 2, 2, 3, 3, 4, \overset{4.5}{\uparrow}, 5, 6$	Median
B:	$1, 1, \overset{1.5}{\uparrow}, 2, 2, 3, 3, 4, 5, 6$	Lower Quartile
C:	$1, 1, 2, 2, \overset{\uparrow}{3}, 3, 4, 5, 6$	Upper Quartile
D:	$\overset{\uparrow}{1}, 1, 2, 2, 3, 3, 4, 5, 6$	Maximum
E:	$1, 1, 2, 2, 3, 3, 4, 5, \overset{\uparrow}{6}$	Minimum

13

Selected Response	/10
Constructed Response	/15
Total Marks	/25
Percentage	/100%



## Content and Skills Assessment 2

# Answer Key

### Selected Response

Q1	D
Q2	C
Q3	B
Q4	A
Q5	B
Q6	C
Q7	B
Q8	A
Q9	C
Q10	A

### Constructed Response

<b>Q11</b>	<p>Showing addition (all data points) and division by 9 [1 mark] Mean value of 10 [1 mark correct answer only]</p> <p>Showing addition (all data points) and division by 9 [1 mark] Mean value of 8 [1 mark correct answer only]</p> <p>Comparing the two averages: e.g. G6-A has higher mean than G6-B [2 marks]</p>	$\text{Mean} = \frac{10+7+12+6+14+25+10+5+1}{9}$ $= \frac{91}{9} = 10$ <p>G6-B: {10, 6, 11, 6, 12, 15, 6, 4, 2}</p> $\text{Mean} = \frac{10+6+11+6+12+15+6+4+2}{9}$ $= \frac{72}{9} = 8$ <p>The average (mean) grade in G6-A is <b>greater than</b> the average grade in G6-B.</p> <p style="text-align: center;">Or</p> <p>G6-A has higher mean/average than G6-B.</p>	/6								
<b>Q12</b>	<p>1 mark each, (correct answer only).</p>	<table border="1" style="width: 100%;"> <tr> <td>Minimum savings</td> <td>AED 10</td> </tr> <tr> <td>Median</td> <td><math>\frac{30+30}{2} = \frac{60}{2} = \text{AED } 30</math></td> </tr> <tr> <td>Range</td> <td><math>60 - 10 = \text{AED } 50</math></td> </tr> <tr> <td>Mode</td> <td>AED 30</td> </tr> </table>	Minimum savings	AED 10	Median	$\frac{30+30}{2} = \frac{60}{2} = \text{AED } 30$	Range	$60 - 10 = \text{AED } 50$	Mode	AED 30	/4
Minimum savings	AED 10										
Median	$\frac{30+30}{2} = \frac{60}{2} = \text{AED } 30$										
Range	$60 - 10 = \text{AED } 50$										
Mode	AED 30										

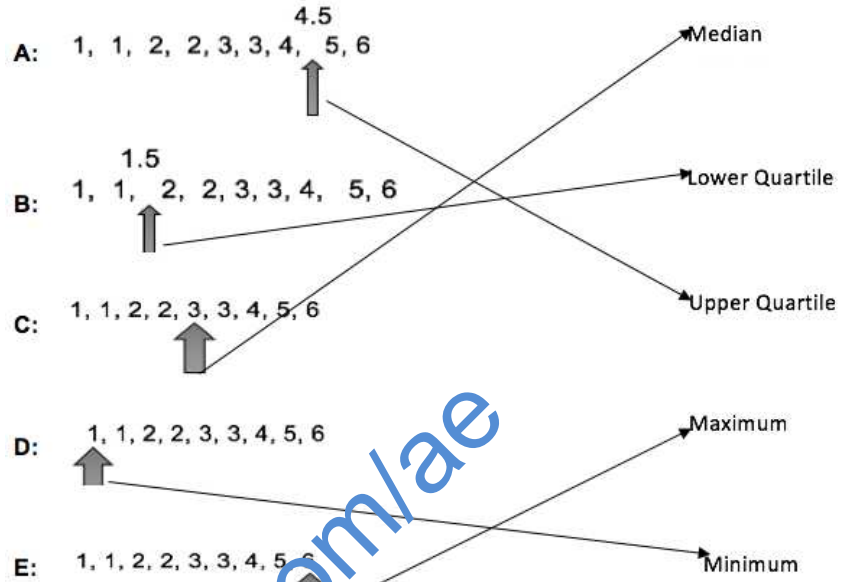


## Content and Skills Assessment 2

### Matching Response:

Q13

1 mark each, (correct matching only).



/5

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## Content and Skills Assessment 2

# Question Analysis Information

Use the information below to help you determine which student learning outcomes are not being met by the majority of your students. This will help you make determinations about re-teaching, spiraling content not mastered, and implementing other interventions without interrupting the scheme of work.

Question	Student Learning Outcome(s)
1	<b>6.sp.1 Identify</b> and <b>design</b> a statistical question.
2	<b>6.sp.2 Display</b> numerical data using dot plots, histograms, and box plots and make observations in terms of the data display.
3	<b>6.sp.3 Report</b> the number of observations in a data set or display.
4	<b>6.sp.4 Describe</b> attributes of data being collected including how it is measured and its units of measurement. <b>6.sp.5 Calculate</b> quantitative measures of center and variability in a real-world context.
5	<b>6.sp.6 Identify</b> outliers from the overall pattern of the data distribution in the context of the investigations. <b>6.sp.7 Determine</b> the effects of outliers on the quantitative measures of a set of data. <b>6.sp.8 Choose</b> appropriate measures of center and variability to describe a set of data in the context of a problem.
6	<b>6.sp.3 Report</b> the number of observations in a data set or display.
7	<b>6.sp.5 Calculate</b> quantitative measures of center and variability in a real-world context.
8	<b>6.sp.5 Calculate</b> quantitative measures of center and variability in a real-world context.
9	<b>6.sp.10 Calculate</b> and <b>compare</b> measures of center and measures of spread for data sets.
10	<b>6.sp.3 Report</b> the number of observations in a data set or display. <b>6.sp.7 Determine</b> the effects of outliers on the quantitative measures of a set of data.
11	<b>6.sp.10 Calculate</b> and <b>compare</b> measures of center and measures of spread for data sets.
12	<b>6.sp.5 Calculate</b> quantitative measures of center and variability in a real-world context.
13	<b>6.sp.9 Examine</b> the distribution of a data set and <b>discuss</b> the center, spread, and overall shape with dot plots, histograms, and box plots. <b>6.sp.10 Calculate</b> and <b>compare</b> measures of center and measures of spread for data sets.