



**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

# **SCHOOL BASED ASSESSMENT**

## **MATHEMATICS**

**(For Regular learners, learners with Physical Impairment and Hearing Impairment)**

**Grade 8 – 2024**

**Scoring Guide**

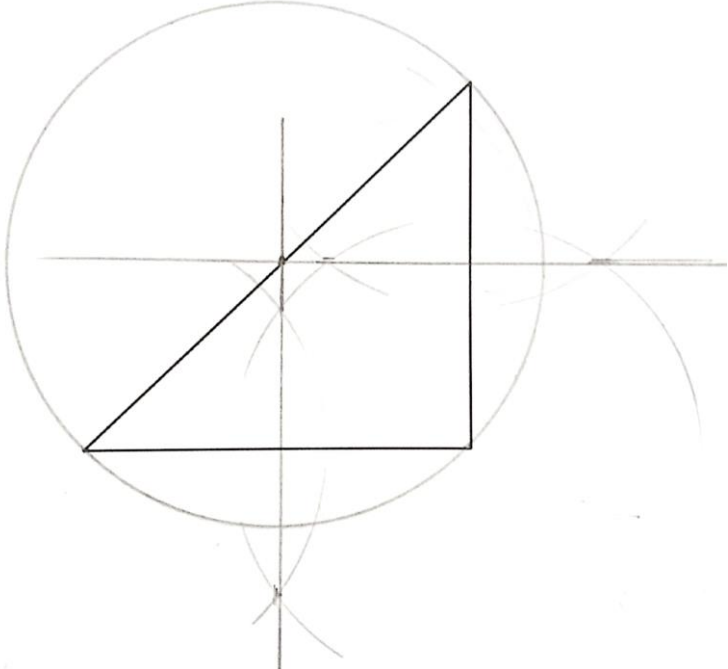
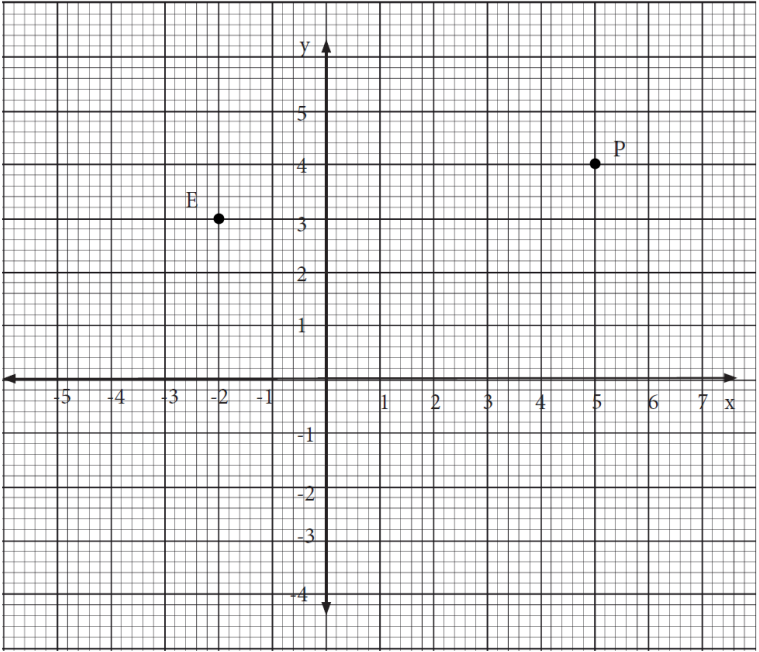
**This Scoring guide consists of 8 printed pages.**

**Mathematics - Scoring Guide  
School Based Assessment  
Grade 8**

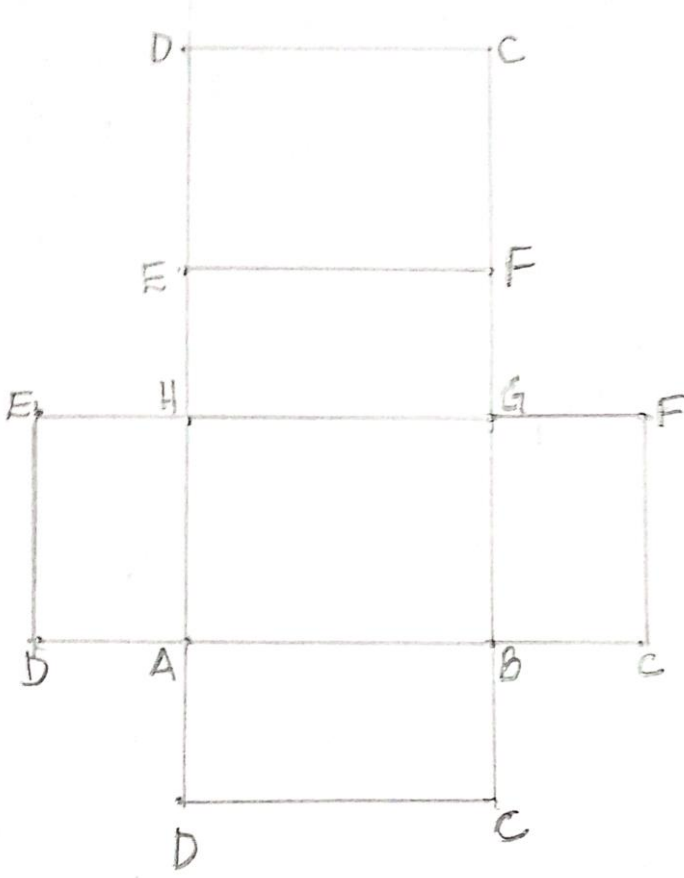
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Question no.	Working	Marks	Comment
1.	Change in temperature = +12	2 2	
2.	Tomatoes = $\frac{1}{5}$ Cabbages = $\frac{1}{2} \times \frac{4}{5} = \frac{2}{5}$ Maize = $1 - \left(\frac{1}{5} + \frac{2}{5}\right)$ $= \frac{2}{5}$	1 1 2	
3.	Let $r = 0.363636\dots$ $100r = 36.363636\dots$ $100r - r = 36$ $99r = 36$ $r = \frac{36}{99} = \frac{4}{11}$	1 1 1 3	
4.	$\sqrt{42.57} = 6.5192$ $\quad + \quad 54$ $\quad \underline{6.5246}$	1 1 2	Reading from tables Answer
5.	Amount of cement = $1 - \frac{2}{3} = \frac{1}{3}$ Ratio, sand : cement = $\frac{2}{3} : \frac{1}{3} = 2 : 1$	1 1 2	
6.	Decrease in milk sold = $20 - 16 = 4$ Percentage decrease = $\frac{4}{20} \times 100\%$ $= 20\%$	1 1 1 3	

7.	$\frac{c^2 + 3d}{4} = \frac{8^2 + 3(4)}{4}$ $= \frac{76}{4} = 19$	1	Correct substitution
		1	
		<b>2</b>	
8.	$4b + 8p = 600$ $2b + 6p = 350$ $4b + 8p = 600$ $\underline{4b + 12p = 700}$ $4p = 100$ $p = 25$ <p>cost of a pen is sh 25.</p>	1	Attempt to solve the equations
		1	
		<b>2</b>	
9.	<p>Arc length = <math>\frac{30}{360} \times 2 \times 3.142 \times 14</math></p> $= 7.331$ $= 7.3 \text{ cm}$	1	
		1	
		<b>2</b>	
10.	<p>Area of curved surface = <math>\frac{22}{7} \times 56 \times 80</math></p> $= 14080 \text{ cm}^2$ <p>Area of circular surface = <math>\frac{22}{7} \times 28^2</math></p> $= 2464 \text{ cm}^2$ <p>Total surface area = <math>14080 + 2464</math></p> $= 16544 \text{ cm}^2$	1	
		1	
		1	
		<b>3</b>	
11.	<p>Interest 1<sup>st</sup> year = <math>50000 \times \frac{8}{100} \times 1</math></p> $= \text{sh } 4000$ <p>Interest 2<sup>nd</sup> year = <math>54000 \times \frac{8}{100} \times 1</math></p> $= \text{sh } 4320$ <p>Amount at end of 2<sup>nd</sup> year = <math>54000 + 4320</math></p> $= \text{sh } 58320$	1	
		1	
		1	
		<b>3</b>	

12.	<p>Sum of interior angles = <math>(2n - 4) 90 = 540</math></p> $2n - 4 = 6$ $n = 5 \text{ sides}$	<p>1</p> <p>1</p> <p><b>2</b></p>	
13.	 <p>Radius = <math>3.5 \pm 0.1</math> cm</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p><b>4</b></p>	<p>Bisecting of two lines</p> <p>Identification of centre- point of intersection of the line bisectors</p> <p>Circle constructed</p> <p>Radius</p>
14.		<p>1</p> <p>1</p> <p><b>2</b></p>	<p>Correct uniform scale</p> <p>Plotting the two points</p>

15.		1 1	For L <sub>1</sub> For L <sub>2</sub>
	Point of intersection = (20, 30) Number of boys = 20 Number of girls = 30	1 1 <b>4</b>	
16.	10 cm represent 5 km 1cm represents 0.5 km Or 1cm represents 500m	1 1 <b>2</b>	
17.	Let the height of building be x 1cm represents 50cm $10 \text{ cm} = 10 \times \frac{50}{1}$ $= 500 \text{ cm} = 5 \text{ m}$	1 1 <b>2</b>	
18.	Triangular pyramid	1	

19.	 <p style="text-align: center;"><math>DF = 5.0 \pm 0.1 \text{ cm}</math></p>	<p style="text-align: center;">2</p> <p style="text-align: center;">1</p> <p style="text-align: center;">1</p> <p style="text-align: center;">2</p>	<p>Correct net with correct measurements</p> <p>Correct labelling of net</p>
20.	<p>Mean temperature = <math>\frac{29+31+32+x+34}{5} = 32</math></p> <p><math>126 + x = 32 \times 5</math></p> <p><math>x = 160 - 126</math></p> <p><math>= 34 \text{ } ^\circ\text{C}</math></p>	<p style="text-align: center;">1</p> <p style="text-align: center;">1</p> <p style="text-align: center;">1</p> <p style="text-align: center;">3</p>	

**SCHOOL BASED ASSESSMENT 2024**

**GRADE 8**

**MATHEMATICS SCORING RUBRICS**

<b>STRANDS/Sub strands</b>	<b>EXCEEDS EXPECTATION</b>	<b>MEETS EXPECTATION</b>	<b>APPROACHES EXPECTATION</b>	<b>BELOW EXPECTATION</b>
<b>NUMBERS:</b> <b>Integers, Fractions, Decimals, Squares and Square roots, Rates, Ratios, Proportions and Percentages.</b> Question nos. 1,2,3,4,5 and 6 <b>(14 marks)</b>	Learner scores <b>11 -14 marks</b>	Learner scores <b>7 – 10 marks</b>	Learner scores <b>3 – 6 marks</b>	Learner scores <b>0 – 2 mark</b>
<b>ALGEBRA:</b> <b>Algebraic Expressions, linear Equations, Linear Inequalities</b> Question nos. 7,8 <b>(4 marks)</b>	Learner scores <b>4 marks</b>	Learner scores <b>3 marks</b>	Learner scores <b>2 marks</b>	Learner scores <b>0 -1 mark</b>
<b>MEASUREMENTS:</b> <b>Pythagorean Relationship, Length, area, Volume and Capacity, Time, Distance and Speed, Temperature, and money</b> Question Nos. 9, 10, 11 <b>(8 marks)</b>	Learner scores <b>7 - 8- marks</b>	Learner scores <b>4 -6 marks</b>	Learner scores <b>2-3 marks</b>	Learner scores <b>0 - 1 marks</b>
<b>GEOMETRY,</b> <b>Angles, Geometric constructions.</b> Question nos. 12, 13, 14, 15, 16, 17,18 and 19 <b>(21 marks)</b>	Learner scores <b>17-21 marks</b>	Learner scores <b>10 - 16 marks</b>	Learner scores <b>5 -9 marks</b>	Learner scores <b>0 – 4 mark</b>
<b>DATA HANDLING AND PROBABILITY:</b> <b>Data representation and Interpretation.</b> Question no. 20 <b>(3 marks)</b>	Learner scores <b>3 marks</b>	Learner scores <b>2 marks</b>	Learner scores <b>1 marks</b>	Learner scores <b>0 mark</b>

**THE KENYA NATIONAL EXAMINATIONS COUNCIL  
MATHEMATICS SCORING SHEET FOR GRADE 8**

S.N o	Name of Learner	<b>NUMBERS:</b> Whole numbers, Factors, Fractions, Decimals, Squares and Square roots Question nos. 1,2,3,4,5 and 6 <b>(14 marks)</b>	<b>ALGEBRA:</b> Algebraic Expressions, linear Equations, Linear Inequalities Question nos. 7,8, <b>(4 marks)</b>	<b>MEASUREMENTS:</b> Pythagorean Relationship, Length, area, Volume and Capacity, Time, Distance and Speed, Temperature and Money Question Nos. 9,10, 11. <b>(8 marks)</b>	<b>GEOMETRY:</b> Angles, Geometric constructions. Question nos. 12, 13, 14, 15, 16, 17,18 and 19 <b>(21marks)</b>	<b>DATA HANDLING AND PROBABILITY:</b> Data Handling Question no. 20 <b>(3 marks)</b>	Comment
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2							
3							
4							
5							
6							
7							
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9							
10							

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