

MINISTRY OF EDUCATION
NATIONAL ANNUAL ASSESSMENT 2023
GRADE 5
MATHEMATICS
PAPER 2

JUNE 27, 2023

Reading Time: 10 minutes
Writing Time: 60 minutes

Read these instructions carefully before you attempt to answer the questions.

1. This paper contains **six** questions. You are required to answer **Question 1** and **three others**.
2. You have 60 minutes of working time and 10 minutes of reading time. Working may begin during reading time.

Each question is worth **5** marks.


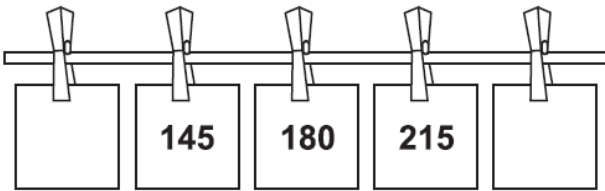
Note: You must answer **only four** questions.

Be sure to answer the **four** questions completely.

3. Write the answer for each question in the space provided in this booklet.
4. Answers **must** be written in complete sentences where possible.
5. Each step of your work **must** be **clearly** shown in this booklet.
6. If you have to erase, do so cleanly.
7. Look over your work when you have finished.
8. **Do not** take away any part of this booklet.

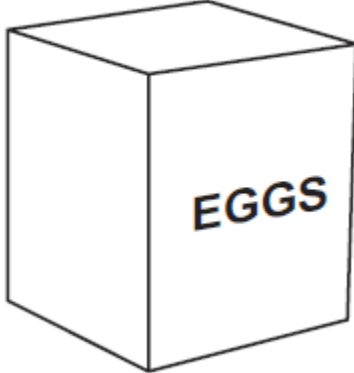

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

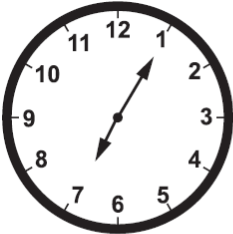
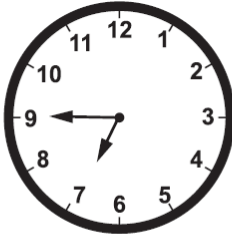
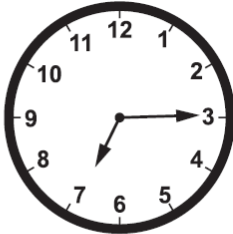
Question 1 is **COMPULSORY**. You **MUST** answer question 1.

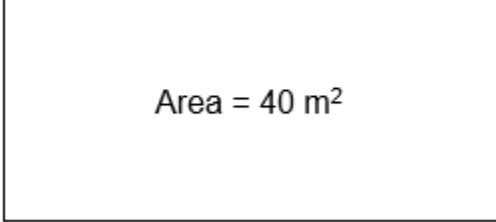
No.	TEST ITEMS	WORKING COLUMN
1	<p data-bbox="289 317 922 350">Study the pattern and then answer the questions.</p> <div data-bbox="337 405 1040 590"><p data-bbox="383 405 418 443">1st</p><p data-bbox="578 405 630 443">2nd</p><p data-bbox="837 405 889 443">3rd</p><p data-bbox="1000 405 1036 443">4th</p></div> <p data-bbox="337 657 1105 695">(a) (i) Draw the 4th shape of the pattern. (1 mark)</p> <p data-bbox="383 961 1089 999">(ii) How many matchsticks will be in the 6th shape?</p> <p data-bbox="480 1129 1101 1167">Answer: _____ matchsticks (1 mark)</p> <p data-bbox="383 1276 987 1314">(iii) Which shape will have 17 matchsticks?</p> <p data-bbox="472 1381 1094 1419">Answer: _____ (1 mark)</p> <p data-bbox="337 1518 1044 1602">(b) The numbers in this sequence increase by 35 each time. Write in the missing numbers.</p> <div data-bbox="396 1612 997 1801"><p data-bbox="548 1728 613 1766">145</p><p data-bbox="670 1728 735 1766">180</p><p data-bbox="792 1728 857 1766">215</p></div> <p data-bbox="976 1854 1089 1892">(1 mark)</p>	

No.	TEST ITEMS	WORKING COLUMN										
	<p data-bbox="337 262 966 352">(c) Place a tick (✓) in the boxes next to the numbers that are factors of 30.</p> <table data-bbox="560 462 812 1207"><tr><td data-bbox="560 504 592 546">2</td><td data-bbox="685 462 812 588"><input type="checkbox"/></td></tr><tr><td data-bbox="560 661 592 703">3</td><td data-bbox="685 619 812 745"><input type="checkbox"/></td></tr><tr><td data-bbox="560 819 592 861">4</td><td data-bbox="685 766 812 892"><input type="checkbox"/></td></tr><tr><td data-bbox="560 976 592 1018">6</td><td data-bbox="685 924 812 1050"><input type="checkbox"/></td></tr><tr><td data-bbox="560 1113 592 1155">9</td><td data-bbox="685 1081 812 1207"><input type="checkbox"/></td></tr></table> <p data-bbox="925 1228 1063 1270">(1 mark)</p>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	6	<input type="checkbox"/>	9	<input type="checkbox"/>	
2	<input type="checkbox"/>											
3	<input type="checkbox"/>											
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No.	TEST ITEMS	WORKING COLUMN
2	<p data-bbox="337 321 1096 451">(a) Pupils of Grade 5 contributed \$160, \$100, \$85 and \$225 to buy a box of fried chicken. Miss Stacy said she will contribute the remainder.</p> <p data-bbox="383 520 946 604">(i) Calculate the total amount of money contributed by the pupils.</p> <p data-bbox="479 772 1058 808">Answer _____ (1 mark)</p> <p data-bbox="383 1024 1047 1150">(ii) If the box of fried chicken cost \$1000, how much more money does Miss Stacy need to contribute?</p> <p data-bbox="479 1224 1084 1260">Answer: _____ (1 mark)</p> <p data-bbox="383 1329 1063 1455">(iii) John, who contributed the \$85, did so with \$5 coins only. How many \$5 coins did he contribute?</p> <p data-bbox="479 1528 1091 1564">Answer: _____ (1 mark)</p>	

No.	TEST ITEMS	WORKING COLUMN
	<p data-bbox="337 317 824 350">(b) A farmer has a box with 144 eggs.</p>  <p data-bbox="383 829 1084 915">He is packing eggs into trays to sell at the market. Each tray holds 10 eggs.</p>  <p data-bbox="337 1192 1089 1276">(i) How many trays of eggs can the farmer fill from the box of 144 eggs?</p> <p data-bbox="431 1346 1073 1379">Answer: _____ (1 mark)</p> <p data-bbox="337 1444 1084 1528">(ii) How many more eggs will be needed to fill another tray?</p> <p data-bbox="431 1598 1084 1631">Answer: _____ (1mark)</p>	

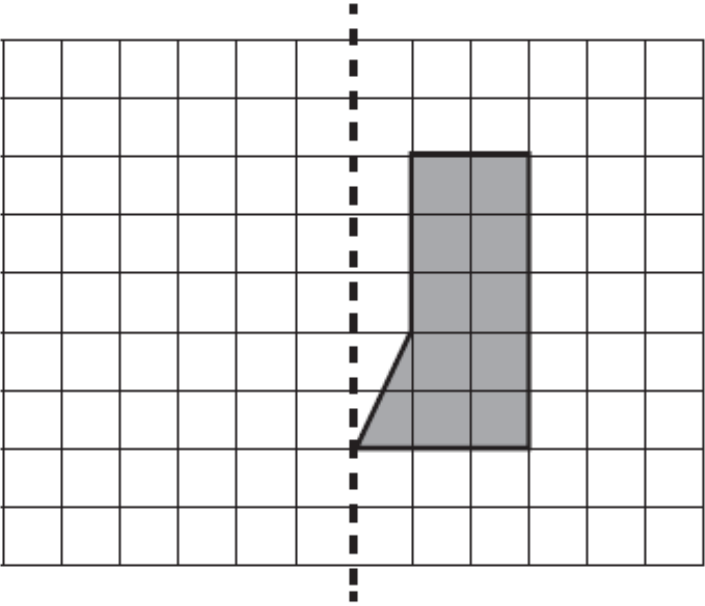
No.	TEST ITEMS	WORKING COLUMN
3	<p>(a) P, Q and R represent the time shown on the clocks below.</p> <p>P - Five minutes past seven Q – Quarter past seven R – Quarter to seven</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <input data-bbox="350 951 496 1016" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="634 951 781 1016" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="906 951 1052 1016" type="text"/> </div> </div> <p>(i) Write the letters P, Q and R in the correct box under each clock above.</p> <p style="text-align: right;">(2 marks)</p> <p>(ii) John left home at 8:30 am for the market and returned two and a half hours later. At what time did John return?</p> <p>Answer: _____ (1 mark)</p>	

No.	TEST ITEMS	WORKING COLUMN
	<p data-bbox="337 342 1097 432">(b) The diagram below represents a rectangular track. Study it carefully and then answer the questions.</p> <div data-bbox="500 499 992 768" style="text-align: center;"><p data-bbox="716 499 773 531">8 m</p><p data-bbox="651 632 841 663">Area = 40 m²</p></div> <p data-bbox="383 835 1089 873">(i) Calculate the width of the rectangular track.</p> <p data-bbox="480 947 1084 982">Answer: _____ (1 mark)</p> <p data-bbox="383 1115 1089 1251">(ii) John walked two times around the rectangular track. How many metres did he walk?</p> <p data-bbox="480 1335 1084 1371">Answer: _____ (1 mark)</p>	

No.	TEST ITEMS	WORKING COLUMN
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4

(a) The diagram below shows a shaded shape on a grid and a line of symmetry.



Line of symmetry

Complete the diagram above to show a symmetrical shape.

(1 mark)

No.	TEST ITEMS	WORKING COLUMN
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(b) The boxes below show the names of angles.
Study them carefully and then answer the questions.

P

Q

R

S

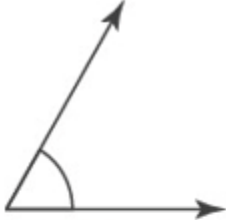
Right angle

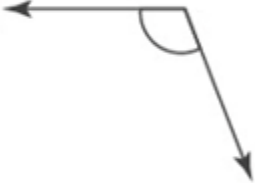
Acute angle

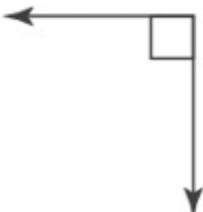
Obtuse angle

Reflex angle

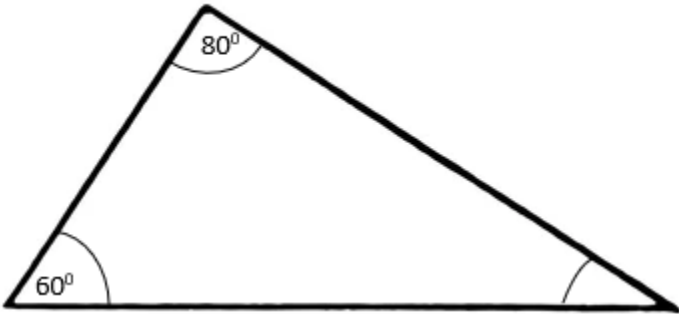
Write the letters: P, Q, R or S in the box that correctly names each angle.



















(2 marks)

No.	TEST ITEMS	WORKING COLUMN
4	<p data-bbox="337 338 1019 432">(c) The diagram below shows a triangle with two given angles.</p>  <p data-bbox="383 890 987 926">(i) Calculate the size of the third angle.</p> <p data-bbox="472 1220 1084 1310">Answer: _____ (1 mark)</p> <p data-bbox="383 1383 951 1474">(ii) Explain why the triangle is not an equilateral triangle.</p> <p data-bbox="477 1549 1084 1734">Answer: _____ _____ _____.</p> <p data-bbox="964 1766 1084 1801">(1 mark)</p>	

No.	TEST ITEMS	WORKING COLUMN									
5	<p>(a) Complete the operation below.</p> $1.38 - 0.7 = \square$ <p style="text-align: right;">(1 mark)</p> <p>(b) Study the multiplication grid and answer the question below.</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;">×</td> <td style="border: 1px solid black; width: 40px; height: 40px;"></td> <td style="border: 1px solid black; width: 40px; height: 40px;"></td> </tr> <tr> <td style="border-top: 1px solid black; padding: 5px;">7</td> <td style="border-top: 1px solid black; padding: 5px;">56</td> <td style="border-top: 1px solid black; padding: 5px;">42</td> </tr> <tr> <td style="border-top: 1px solid black; padding: 5px;">□</td> <td style="border-top: 1px solid black; padding: 5px;">72</td> <td style="border-top: 1px solid black; padding: 5px;">54</td> </tr> </table> <p>Fill in the missing numbers to correctly complete the multiplication grid. (2 marks)</p> <p>(c) A book has 93 pages. Alisha read $\frac{1}{3}$ of the book.</p> <p>(i) What fraction of the book does Alisha still have to read? Answer: _____ (1 mark)</p> <p>(ii) How many more pages does she still have to read? Answer: _____ (1 mark)</p>	×			7	56	42	□	72	54	
×											
7	56	42									
□	72	54									

No.	TEST ITEMS	WORKING COLUMN												
6	<p data-bbox="337 338 1036 432">(a) The table below shows the favourite games of Grade 5 pupils.</p> <table border="1" data-bbox="337 506 1065 846"> <thead> <tr> <th data-bbox="337 506 699 560">Games</th> <th data-bbox="699 506 1065 560">No. of pupils</th> </tr> </thead> <tbody> <tr> <td data-bbox="337 560 699 615">Cricket</td> <td data-bbox="699 560 1065 615">18</td> </tr> <tr> <td data-bbox="337 615 699 669">Football</td> <td data-bbox="699 615 1065 669">12</td> </tr> <tr> <td data-bbox="337 669 699 724">Basketball</td> <td data-bbox="699 669 1065 724">15</td> </tr> <tr> <td data-bbox="337 724 699 779">Hopscotch</td> <td data-bbox="699 724 1065 779">16</td> </tr> <tr> <td data-bbox="337 779 699 846">Jump rope</td> <td data-bbox="699 779 1065 846">9</td> </tr> </tbody> </table> <p data-bbox="337 905 1084 940">(i) What is the least favourite game of the pupils?</p> <p data-bbox="431 1014 1089 1050">Answer: _____ (1 mark)</p> <p data-bbox="337 1123 1094 1213">(ii) What is the average number of Grade 5 pupils who enjoy games?</p> <p data-bbox="431 1287 1089 1323">Answer: _____ (1 mark)</p> <p data-bbox="337 1396 1094 1486">(iii) What fraction of the pupils enjoy games played with a ball?</p> <p data-bbox="431 1507 1089 1543">Answer: _____ (1 mark)</p>	Games	No. of pupils	Cricket	18	Football	12	Basketball	15	Hopscotch	16	Jump rope	9	
Games	No. of pupils													
Cricket	18													
Football	12													
Basketball	15													
Hopscotch	16													
Jump rope	9													

No.	TEST ITEMS	WORKING COLUMN															
	<p data-bbox="337 342 1097 485">(b) The diagram below shows the insects found in an insect scavenger hunt. Study it and then answer the questions that follow.</p> <p data-bbox="508 533 857 621" style="text-align: center;">INSECT SCAVENGER HUNT TALLY CHART</p> <table border="1" data-bbox="318 632 1070 1031"> <thead> <tr> <th data-bbox="318 632 570 674">Insect</th> <th data-bbox="570 632 889 674">Tally</th> <th data-bbox="889 632 1070 674">Total</th> </tr> </thead> <tbody> <tr> <td data-bbox="318 674 570 764">Ladybug </td> <td data-bbox="570 674 889 764"> </td> <td data-bbox="889 674 1070 764">6</td> </tr> <tr> <td data-bbox="318 764 570 854">Ant </td> <td data-bbox="570 764 889 854"></td> <td data-bbox="889 764 1070 854">12</td> </tr> <tr> <td data-bbox="318 854 570 945">Butterfly </td> <td data-bbox="570 854 889 945"> </td> <td data-bbox="889 854 1070 945">4</td> </tr> <tr> <td data-bbox="318 945 570 1031">Mosquito </td> <td data-bbox="570 945 889 1031"> </td> <td data-bbox="889 945 1070 1031">10</td> </tr> </tbody> </table> <p data-bbox="380 1108 1097 1255">(i) Complete the tally for the number of ants collected. (1 mark)</p> <p data-bbox="380 1381 1097 1476">(ii) Which insect was collected three times as many as the butterfly? Answer: _____ (1 mark)</p>	Insect	Tally	Total	Ladybug 		6	Ant 		12	Butterfly 		4	Mosquito 		10	
Insect	Tally	Total															
Ladybug 		6															
Ant 		12															
Butterfly 		4															
Mosquito 		10															

END OF ASSESSMENT