

Mathematics Project

Total: 50

Date

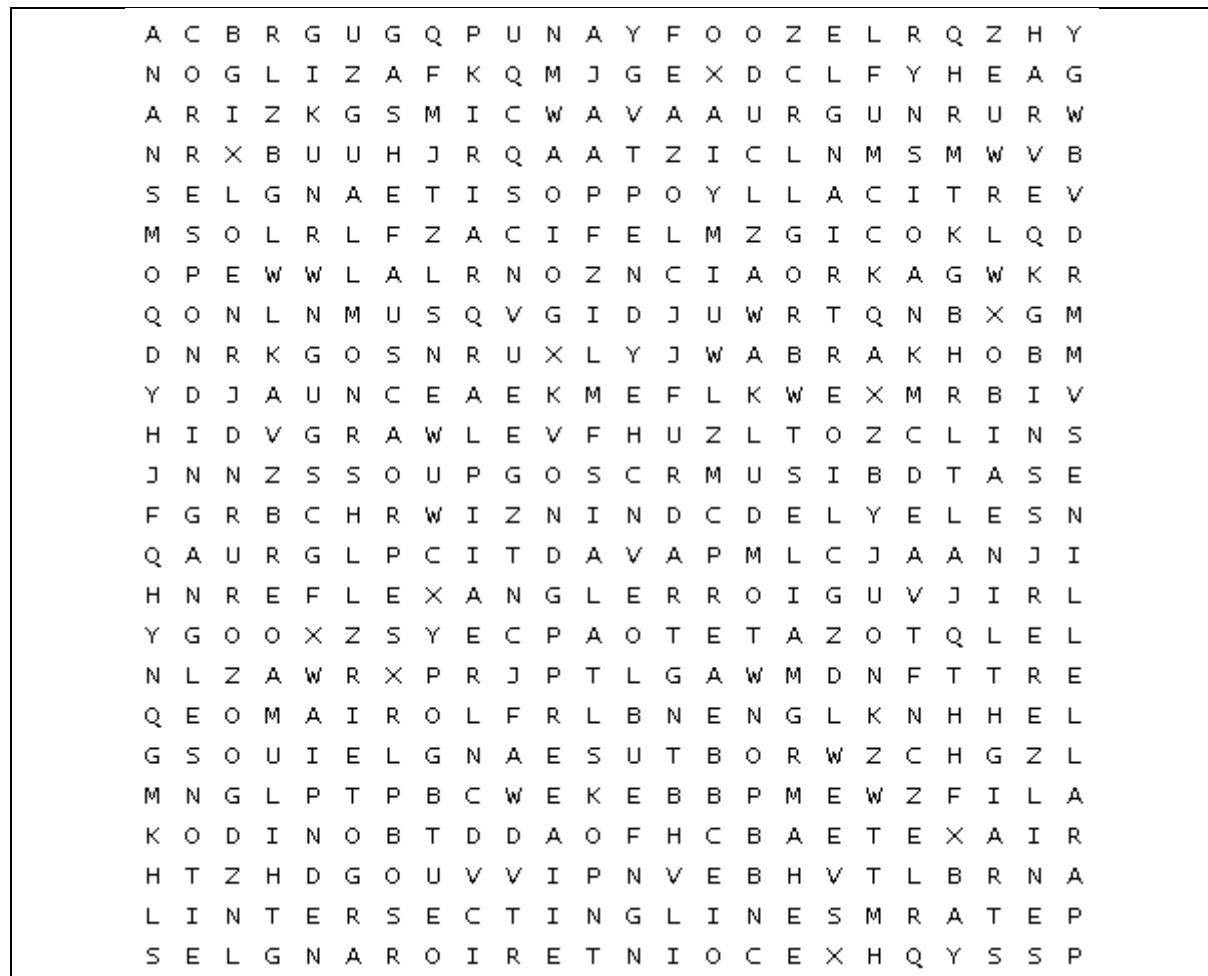
INSTRUCTIONS AND INFORMATION

Read the following instructions carefully, before answering the questions.

1. This question paper consists of 3 sections.
 2. Section A – Theory
Section B – Application
Section C – Poster
 3. ALL workbooks, textbooks eg. may be used.
 4. Answer ALL the questions on the question paper.
 5. A calculator may be used UNLESS otherwise indicated.
 6. Display all calculations, diagrams, and graphs you used to get your answers.
Only answers alone will not necessarily earn full marks.
 7. Write with a blue pen.
 8. Use a ruler and pencil when drawing graphs.
 9. Show ALL steps and operations.
 10. Write neatly and legible.
 11. Think carefully before writing. GOOD LUCK!!!!
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SECTION A – STRAIGHT LINE GEOMETRY**Question 1 –**

Answer the following questions and complete the word search by searching for the answers.



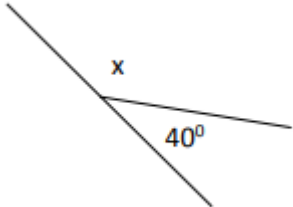
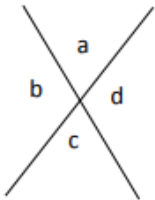
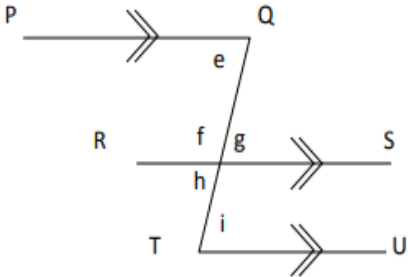
1. An instrument used to measure angles.
2. Angle greater than 90° , less than 180° .
3. Angles that can be identified by looking for the letter "Z".
4. Angles add up to 180° .
5. _____ lines form two angles of 90° .
6. Greater than 180° , less than 360° .
7. 90° angle.
8. Angles that can be identified by looking for the letter "F".

9. Angles opposite each other are the same size.
10. _____ is a straight line which intersects with two or more lines.
11. Sum of angles in a _____ is 180° .
12. Greater than 0° , less than 90° .
13. Lines that cross each other.
14. Angles that can be identified by looking for the letter "C".
15. When a transversal cuts two or more parallel _____, some _____ are formed.
16. Angles are all part of what topic in mathematics?
17. Lines that are always the same distance apart, but never intersect each other.

Section A total: /18

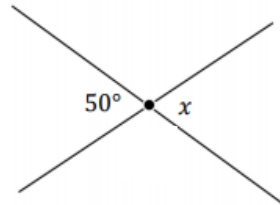
SECTION B – STRAIGHT LINE GEOMETRY: APPLICATION**Question 2 –**

- 2.1 For each of the following questions, give ONLY the correct reason for the corresponding statement. (5)

	Statement	Reason
	$x + 40^\circ = 180^\circ$	2.1.1 _____ _____
	$a + b + c + d = 360^\circ$	2.1.2 _____ _____
	$e + f = 180^\circ$ $e = g$ $i = g$	2.1.3 _____ _____ 2.1.4 _____ _____ 2.1.5 _____ _____

2.1 Determine the value of x , y and z , in alphabetical order for each diagram.
(Give a reason for your answer)

2.1.1

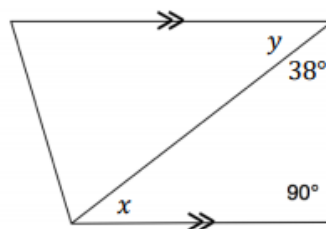


(2)

Statement

Reason

2.1.2



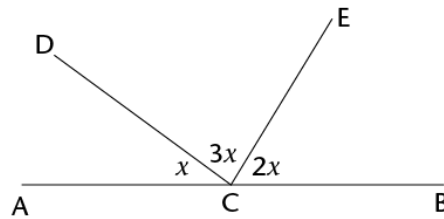
(4)

Statement

Reason

2.1.3

(3)



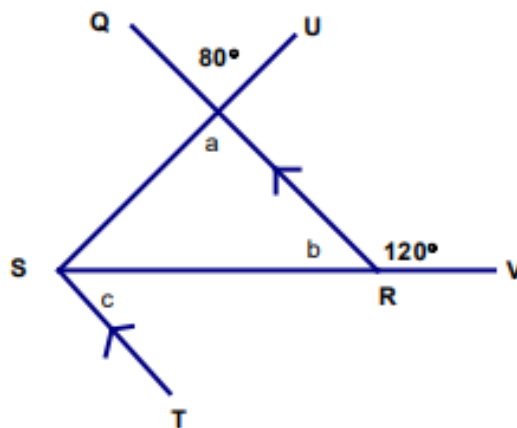
Statement

Reason

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2.2 Determine the value of a , b and c , in alphabetical order for each diagram.
(Give a reason for your answer)

(6)



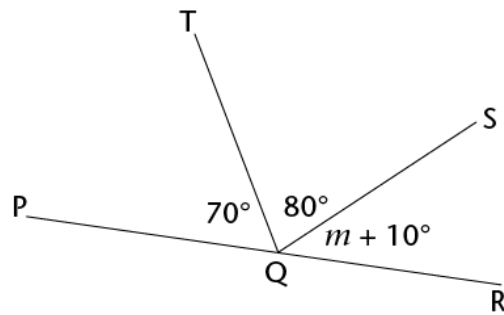
Statement

Reason

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2.3 Determine the value of m . (Give a reason for your answer)

(2)



Statement

Reason

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Section B total: /22

SECTION B – STRAIGHT LINE GEOMETRY: POSTER**Question 3 –****1. Appearance - (2)**

- The project must be done on A4 paper.
- It must be drawn neatly and in colour.
- Neatly print your name in the top right corner of the project.
- You may add detail as long as it does not interfere with the requirements or the appearance of the map.
- Remember to be creative.
- Your project must be unique to you.

**2. Drawing the Streets (2)**

- At the top left corner of the poster, indicate the name of your residential area and indicate the number of houses in the residential area.
- Draw three (3) streets that are parallel to each other. Each street should be named for reference.
- Draw Two (2) transversal streets. (i.e., Two streets that intersect all three of the above parallel streets). These should be named as well. Do *not* make the transversals parallel to each other!!!
- Draw Traffic lights or stop signs at four (4) different intersections.
- Location of the Buildings

3. The buildings must be placed in the following locations. (6)

- Your house and the school at alternate angles.
- The post office and the bank at co - interior angles.
- The Church and police station at corresponding angles.
- The library and post office at vertically opposite angles.
- The Petrol station and Spaza shop at supplementary angles.
- The Church and Your house at corresponding angles.

Section B total: /10

Criteria	Excellent 2	Average 1	Not achieved 0
Appearance	Excellent work, made a lot of effort. Made use of colours and added extra detail.	Good work. Made use of colours and added moderate detail.	No effort was made and no colour or detail was added.
Streets	Exceptional drawing of the streets, all streets has been named. 3 lines are parallel and 2 are intersecting lines.	Good drawing of the streets, some streets has been named. Some lines are parallel and some are intersecting lines.	Poor drawing of the streets, None of the streets has been named. No lines are parallel and no lines are intersecting.

Criteria	Excellent 6	Moderate 5	Average 4	Poor 3	Not achieved 2	Not done 1
Buildings	All buildings have been placed in the correct place.	8-7 buildings have been placed in the correct place.	6-5 buildings have been placed in the correct place.	4-3 buildings have been placed in the correct place.	2-1 buildings have been placed in the correct place.	0 buildings have been placed in the correct place.

	TOTAL : /10
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