**GRADE: 9**

**SUBJECT: MATHEMATICS**

**TERM 2**

**FORMAL ASSESSMENT TASK (FAT)**

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

School: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Educator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **FAT**  | **ACTIVITY/FORM** | **Learner’s point** | **Learner %** |
| 2.1 | TEST |  |  |
| **TOTAL** |  |  |

**MATHEMATICS GRADE 9 FORMAL ASSESSMENT TASK (FAT):**

 **TEST**

**Total: 50 Marks Time: 1 Hour**

Instructions:

1. Answer all the questions.
2. Write your name and date.
3. No calculators allowed.
4. Show calculations as requested.
5. The marks allocated are an indication of the number of steps per calculation.
6. Check your answers.
7. Round off all answers to the 2nd decimal place

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| **VRAAG 1** | **QUESTION 1** |
| Gegee: AB = BC ; BC ll DE ; * 1. Bepaal (met redes) die groottes van:
		1.

  | Given: AB = BC ; BC ll DE ; * 1. Determine (with reasons) the sizes of:
		1. (2)

1.1.2 (4)  |
|  |  |  |  |  |
| 1.2 | Gegee / Given: SO = 8 cm ; NO = 12 cm ; = 27  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1.2.11.2.21.2.3 | Watter tipe vierhoek is SNAP?Gee redes vir jou antwoord. Bepaal die grootte van . Gee redes vir jou antwoord.Bepaal die grootte van .Gee redes vir jou antwoord. | 1.2.1 1.2.2 1.2.3  |  What type of quadrilateral is SNAP? Give reasons for your answer.  Determine the size of . Give reasons for your answer. Determine the size of . Give reasons for your answer. (2) **[12]** | (2)(2) |
| **VRAAG 2** | **QUESTION 2** |
| 2.1. | Gebruik die stelling van Pythagoras en bewys of die volgende reghoekige driehoeke is. |  | Use the theorem of Pythagoras to prove whether the following triangles are right angled triangles. |
| 2.1. | AB = 5BC = 4CA = 3 | 2.1. | AB = 5BC = 4CA = 3 | (2) |
|  |  |  |  |  |
| 2.2. | Gebruik die stelling van Pythagoras om x te bereken. Rond af tot twee desimale posisies, waar nodig. | 2.2. | Use the theorem of Pythagoras to calculate x. Round off to two decimal places where necessary.  |
|  | 2.2.1.x8 cm5 cmBAC | (3) |
|  |  |  |  |  |

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| 2.3 Look at the sketch below. Bestudeer die sketsABCFED |
| 2.3.1 Name a pair of parallel line segments. 2.3.1 Noem ‘n paar paralelle lyn segmente (2) |
| 2.3.2 Name two pairs of perpendicular line segments. 2.3.2 Noem twee pare loodregte lyne (2) AB and EF EF and BF, AB and BF [9]  |

**VRAAG 3** **QUESTION 3**

3.1 Sê of die volgende stellings 3.1 Say if the following statements

 WAAR of VALS is: are TRUE or FALSE:

3.1.1 Gelykvormige driehoeke is 3.1.1 Similar triangles are

 altyd kongruent. always congruent. (1)

3.1.2 Alle gelyksydige driehoeke is 3.1.2 All equilateral triangles are

 gelykvormig aan mekaar. similar to one another. (1)

3.1.3 Twee gelyke sye en enige 3.1.3 Two equal sides and any

 ooreenstemmende hoek is altyd corresponding angle are always

 genoeg rede om kongruensie in enough to prove congruency in

 twee driehoeke te bewys. two triangles. (1)

3.2 3.2

Sê of die volgende pare driehoeke Say if the following triangles are

kongruent is of nie. congruent or not.

Indien wel, **noem** die kongruente driehoeke If so, **name** the congruent triangles and

met die toepaslike rede vir kongruensie. give the applicable reason for congruency.

Indien die driehoeke **nie** kongruent is nie, If the triangles are **not** congruent,

verduidelik hoekom. explain why.

3.2.1 3.2.2

 (4)

3.3 ABCD is ‘n parallelogram. 3.3 ABCD is a parallelogram

 Bewys dat . Prove that .

 (6)

3.4 Gegee: */ Given:* ; .

 Bewys dat / Prove that:

 (4) **[17]**

**VRAAG 4 QUESTION 4**

4.1 Sê of die volgende driehoeke 4.1 Say whether the following triangles

 gelykvormig is of nie. Gee ‘n rede are similar or not. Give a reason for

 vir jou antwoord. your answer.



 (2)

4.2 Bewys dat lll 4.2 Prove that lll

 (4)

 **[6]**

**VRAAG 5**

 Konstrueer die volgende skets akkuraat deur eers ‘n **rowwe plan te teken**: - jy mag net

 ‘n **liniaal en passer gebruik – los alle konstruksielyne**.

 ‘n Wildplaas is in die vorm van ‘n driehoek,.

 Sy AB is 16 km lank en sy BC is 10 km lank.

 Gebruik die skaal 1cm : 1km om die skets te konstrueer.

 **Gebruik BC as die horisontale basis.**

 **Meet AC en dui dit aan op die skets.Dui die hoekpunte aan deur A, B en C.**

**QUESTION 5**

 Construct the following map accurately by **first drawing a rough plan**: - you may

 only **use a ruler and compass – leave all construction arcs.**

 A Game Farm has a shape of a triangle, .

 Side AB is 16 km long and side BC is 10 km long.

 Use a scale of 1cm : 1km to construct the map.

 **Use BC as the horizontal base**

 **Measure AC and fill it in on your map. Label the vertices A,B and C [6]**

 **TOTAAL / TOTAL: [50]**

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