

# ASSIGNMENT

**D9 JE**

**GRADE 9**

MATHEMATICS

# 2014

# SCHOOL BASED ASSESSMENT TASK

# MARKS: 50

# WEIGHTED MARK: 10

# SUGGESTED TIME: 1 hour

# TERM 1: Investigation

**INVESTIGATION**

**2015**

**MARKS: 60**

**TIME: 1 hour**

**This question paper consists of 8 pages**

**NAME :**

**GRADE 9 :**

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| **MATHEMATICS** |

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| **INSTRUCTIONS AND INFORMATION**  1. This question paper consists of **SECTION** A and **SECTION B** based on the prescribed content framework in the CAPS document.  **SECTION A: MULTIPLE CHOICE**  QUESTION 1: TEN MULTIPLE CHOICE QUESTIONS  **ANSWER ALL SECTIONS ON SPACE PROVIDED**.  **SECTION B: THREE QUESTIONS**  2. Answer ALL questions in both SECTIONS.  3. A non-programmable calculator may be used unless otherwise stated.  4. In **SECTION A** **circle** the letter of the correct answer; and if you change your decision cross out the circled letter and circle your new choice  5. In SECTION B show all necessary steps in your working unless otherwise stated.  6. When answering questions, candidates must apply their knowledge, skills and insight.  7. Number the answers correctly according to the numbering system used in this question paper.  8. Write neatly and legibly. |

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| **SECTION A** | | | |  |
| **Question 1** | | | |  |
| 1. | Circle the letter of the correct answer from the four possible answers. | | |  |
|  |  | | |  |
|  | 1.1 |  | |  |
|  |  | D |  | (1) |
|  | 1.2 | The LCM of and is… | |  |
|  |  | C |  | (1) |
|  | 1.3 | What is the value of ? | |  |
|  |  | D |  | (1) |
|  | 1.4 | = | |  |
|  |  | C | 1 | (1) |
|  | 1.5 | Which one of the following cube roots is **not** irrational? | |  |
|  |  | C |  | (1) |
|  | 1.6 | A school employs teachers in the ratio 1:20 to the number of children. If the school has 600 children, how many teachers does it need? | |  |
|  |  | C | 30 | (1) |
|  | 1.7 | decreased by | |  |
|  |  | B | R204 | (1) |
|  | 1.8 | Complete: is… | |  |
|  |  | B | both a real and rational number | (1) |
|  | 1.9 | What is the HCF of 162 and 270? | |  |
|  |  | D | 3 3 3 2 | (1) |
|  | 1.10 | Complete: | |  |
|  |  | B | 400 | (1) |
|  | | | | **[10]** |

|  |  |  |  |  |
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| **SECTION B** | | | | |
| **Question 2** | | | | |
| 2.1 | The overnight temperature in Polokwane drops from 11 °C to −2 °C. By how many degrees has the temperature dropped?  🗸  11 °C − (−2 °C) = 13 °C🗸 | | | | (2) |
| 2.2 | Simplify | | | |  |
|  | 2.2.1 | | 🗸  🗸  🗸 | | (3) |
|  | 2.2.2 | | 🗸 🗸  🗸 | | (3) |
|  | 2.2.3 | | 5,8 ( leave your answer in scientific notation)  🗸 🗸  🗸 | | (3) |
|  | 2.2.4 | | )  = 3 − 4 = −1🗸🗸🗸 | | (3) |
|  | 2.2.5 | | = 27 − 64 − 8 – 1= −46🗸🗸🗸 | | (3) |
|  | 2.2.6 | | 🗸 | | (3) |
|  | | | | | **[20]** |
| **Question 3** | | | | | |
| 3.1 | | Susie buys a car on hire purchase. The car costs R130 000. She pays a 10% deposit on the cash price and will have to pay monthly instalments of R4 600 for a period of three years. David buys the same car, but chooses another option where he has to pay a 35% deposit on the cash price and monthly instalments of R3 950 for two years. | | |  |
|  | | 3.1.1 | | Calculate the HP price for both options.  🗸  Susie: R13 000 + (36 × 4 600) = R178 600🗸  🗸 🗸  David: (35% × R130 000) + (24 × R3 950) = R45 500 + R94 800 = R140 300🗸 | (5) |
|  | | 3.1.2 | | Calculate the difference between the total price paid by Susie and by David.    R178 600 − R140 300 = R38 300🗸 | (1) |
|  | | 3.1.3 | | Calculate the interest that Susie and David have to pay as a percentage of the cash price.    Susie: R178 600 − R130 000 = R48 600. 🗸    R48 600 ÷ R130 000 × 100% = 37,38 …% ≈ 37,4%🗸    David: R140 300 − R130 000 = R10 300. 🗸    R10 300 ÷ R130 000 × 100% = 7,92 …% ≈ 7,9%🗸 | (4) |
| 3.2 | | Sipho has R5000 to invest for 10 years. His bank offers him 6,5% p.a. on compound interest. His uncle offers him 7,5% on simple interest. Which of the investments is the best option for an investment of 10 years?  **The Bank since**  **🗸 🗸 whereas,**  **The uncle offers only**  🗸  **🗸**  **Therefor the Bank offers 🗸** | | | **(5)** |
| 3.3 | | How long will it take for an investment of R3000 at 8% per annum simple interest to earn R960 interest?  🗸 🗸  🗸 | | | **(3)** |
| 3.4 | | Mandy wants to order a book from the internet. The price of the book is $25,86. What is the price of the book in rands? Take the exchange rate as R9,95 for $1.  $25,86 × R9,95/$ = R257,307 ≈ R257,31🗸 | | | **(1)** |
| 3.5 | | Bongani is a car salesperson. He earns a commission of 3% on the sale of a car with the value of R220 000. Calculate how much commission he earned.  3% × R220 000 = R6 600 commission🗸 | | | **(1)** |
|  | | | | | **[20]** |
| Question 4 | | | | | |
|  | | | | | |
| 4.1 | If 4,5 kg sugar costs R36, what will 2,5 kg of sugar cost?  🗸  🗸 | | | | (2) |
| 4.2 | Dumisani earns R42 480 per month. He splits his earnings in the ratio 7:5. And then saves the lesser amount. How much does he save?  🗸 🗸  🗸 | | | | (2) |
| 4.3 | Write the ratio in the simplest form. 🗸 🗸  🗸 | | | | (3) |
| 4.4 | Biltong is sold at R21,50 per kilogram. Complete the table below:   |  |  |  | | --- | --- | --- | | Amount of biltong | Amount paid | Change in Rands | | 2 kg | R50,00 | R7,00 | | **1 kg**🗸 | R40,00 | R18,50 | | 500 g | **R15,00**🗸 | R4,25 | | 3,5 kg | R200,00 | **R124,75**🗸 | | | | | (3) |
|  | | | | | **[10]** |
| **TOTAL: 60** | | | | | |

**FORMULA-SHEET**

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| --- | --- |
| Simple Interest: | Compound Interest: |