GRADE 10 · FUNCTIONS AND GRAPHS

What a Function Really Is: Words, Tables, Formulae & Graphs (Grade 10)

WORKSHEET

Name: ..... Class: .....

Date: .....

MARK ____ / 22

Answer all questions. Show all your working — marks are awarded for method as well as the final answer.

1 Explain, in your own words, what makes a relationship a FUNCTION. (2)

2 Write the rule "multiply by 3, then subtract 4" as a formula in function notation. (2)

3 Determine the rule for the table x: 1, 2, 3, 4 $\rightarrow$ y: 5, 8, 11, 14. (3)

4 If $f(x) = 4x - 7$, determine $f(3)$. (2)

5 If $f(x) = x^2 + 2x$, determine $f(-3)$. (2)

6 If $f(x) = 5x + 1$, determine the value of x for which $f(x) = 26$. (2)

7 Write down the domain and the range of $f(x) = x^2$. (2)

8 Explain why $f(x) = x^2$ is still a function even though $f(-4)$ and $f(4)$ are both 16. (2)

9 State the vertical line test and say what it tells you. (2)

10 A taxi charges R12 to get in plus R7 per kilometre. Write a formula for the cost C of a journey of k kilometres, and calculate the cost of a 15 km trip. (3)

TOTAL: 22 marks

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