# Mathematics Essential

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

## Task 2.4 – Unit 2

**Assessment type:** Response - Skills

**Conditions:**

Time for the task: 25 minutes

In class, calculator permitted

**Marks:**  marks \_\_\_\_\_\_/ 26

**Task weighting:**

2% of the school mark for this unit

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**Question 1:** (4 Marks-2,2)

The following nutritional information is shown on the packaging of a loaf of bread:

*Serving Size – 2 slices (80g)*

*Protein 7g*

*Fat 3.5g*

*Carbohydrates 33g*

1. What is the ratio (in simplest form) of protein to fat?
2. What percentage of the serving size is fat?

**Question 2:** (2 Marks)

What is the cost of paving a driveway that is 18m long and 4m wide, if the paving costs $35 per square metre?

**Question 3:** (2 Marks)

It is 30km from Margaret River to Karridale. How long will it take to drive from Karridale to Margaret River at an average speed of 75km/h?

**Question 4:** (5 Marks-4,1)

Tim had the following test results.

Mathematics 64 out of 70 English 79 out of 82

Science 34 out of 40 HASS 53 out of 65

1. Calculate each test result as a percentage.
2. Order the subjects from lowest to highest percentage.

**Question 5:** (3 Marks-1,1,1)

Kim was absent from school on 8 days in Term 1. There were 44 school days in Term 1. Write the following ratios in simplest form:

1. days absent to total days
2. days absent to days present
3. days present to total days

**Question 6:** (3 Marks-1,1,1)

A magazine listed fuel consumption rates for the following small cars:

|  |  |
| --- | --- |
| **Model** | **Fuel Consumption** |
| Car 1 | 6.2L/ 100km |
| Car 2 | 6.6L/ 100km |
| Car 3 | 5.7L/ 100km |

1. How much fuel would Car 1 use travelling a distance of 200km?
2. How much fuel would Car 2 use travelling a distance of 150km?
3. How much fuel would Car 3 use travelling a distance of 486km?

**Question 7:** (4 Marks-2,2)

1. Brian has to be travel to an appointment 24km away. He wants to be there in 30 minutes. What average speed does Brian need to travel 24km in exactly 30 minutes?
2. An ambulance is travelling along the freeway to an accident at a speed of 120km/h. The accident is 15km from the ambulance station. How long will the ambulance take to travel from the station to the accident?

**Question 8:**  (3 marks: 2, 1)

Billy is trying to decide between two irrigation systems:

* + - David Pump System: delivers 650L per hour
    - Aquasmart System: delivers 200 mL per second

1. How many litres does the Aquasmart system deliver in an hour?
2. Which system delivers the greater amount of water?