## Practice Exam 3

## NON- CALCULATOR

1. Dave and Elaine each have the same monthly data allowance on their mobile phone contract.
Dave has used $\frac{4}{7}$ of his monthly data allowance.
Elaine has used $\frac{5}{8}$ of her monthly data allowance.
Who has used the most data?
Give a reason for your answer 3 marks
2. The table below shows the average monthly exchange rates for British pounds (GBP) to euros (EUR) between January and July 2012.

| Average Monthly Rates (1 GBP to EUR) |  |
| :--- | :---: |
| January | 1.2018 EUR |
| February | 1.1949 EUR |
| March | 1.1984 EUR |
| April | 1.2166 EUR |
| May | 1.2435 EUR |
| June | 1.2410 EUR |
| July | 1.2637 EUR |

Using the information above, how many more euros would I have received if I changed $£ 500$ when the exchange rate was at its highest compared to its lowest?
Show all working. 3 marks
3. The "accessibility guidelines for buildings and faculties for wheelchair access" give two recommendations.

- The maximum gradient of a ramp shall be 0.083 .
- The maximum rise shall be 760 mm for any length of run.

The drawing below shows the design for a new ramp.


Does the new ramp meet the recommendations? Give a reason.
2 marks

National 5 Lifeskills mathematics

## CALCULATOR

4. The travelling expenses claimed by salesperson depend on the engine capacity of the car and the number of miles travelled per week as shown in the table below.

| ENGINE CAPACITY | EXPENSES PER MILE |
| :--- | :--- |
| Less than or equal to 1 litre | $£ 0.25$ for each of the first 250 miles |
| Greater than 1 litre but less than or <br> equal to 1.2 litres | $£ 0.27$ for each of the first 250 miles |
| Greater than 1.2 litres | $£ 0.29$ for each of the first 250 miles |
| Where the number of miles travelled in a week is greater than $250, £ 0.15$ can be <br> claimed for each additional mile. |  |

Find the expenses claimed by a salesperson in a week when 550 miles are travelled and the engine capacity is 1.6 Litres.

4 marks
5. A copy of Logan Pollock's payslip is shown below for one week in February.

| Name <br> L. Pollock | Employee No. <br> 027 | Tax Code <br> 641. | Week Ending <br> $14 / 02 / 2012$ |
| :--- | :--- | :--- | :--- |
| Basic Pay <br> $£ 296 \cdot 00$ | Overtime Pay <br> $£ 55 \cdot 50$ | Bonus <br> - | Gross Pay <br> $£ 351 \cdot 50$ |
| National Insurance <br> $£ 20.04$ | Income Tax <br> $£ 45 \cdot 40$ | Pension <br> $£ 21 \cdot 09$ | Deductions <br> $£ 86 \cdot 53$ |

Logan worked 40 hours for his basic pay.
If overtime is paid at the rate of "time and a half", calculate how many hours of overtime he worked during that week. 3 marks
6. One weekend, the attendances at five Premier League football matches were recorded.

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8900 \quad 12700 \quad 59200 \quad 10300 \quad 9700
$$

The median attendance is 10300.
(a) Calculate the mean attendance. 1 mark
(b) Which of the two averages is more representative of the data?

You must explain your answer.
1 mark
7. A superstore has three kinds of paint.
(a) Using the information shown, explain why Coverite appears to give the best value for money.


3 marks
(b) On the backs of the tins is more information. Using this additional information, decide which paint is the best value for money.
You must show all your working.


3 marks
8. In January, Tony weighed himself. The scales read 95 kg .

He is going on holiday on the $6^{\text {th }}$ July. He wants to hit a target weight of 73 Kg by then.
On the $1^{\text {st }}$ February, he hired Calum as his personal trainer. Calum reckoned his programme of exercise and diet would see Tony reduce his weight by $6 \%$ each month.
If Calum's programme is successful, will Tony reach his target weight before the date of his holiday?
Use your working to justify your answer.

