A screenshot of a cell phone

Description automatically generated

Income

**Instructions**

* Use **black** ink or ball-point pen.
  + **Fill in the boxes** at the top of this page with your name,  
    centre number and candidate number.
* Answer **all** questions.
* Answer the questions in the spaces provided  
  *– there may be more space than you need.*
* You must **show all your working.**
* Diagrams are **NOT** accurately drawn, unless otherwise indicated.
* If your calculator does not have a *π* button, take the value of *π* to be3.142

unless the question instructs otherwise.

**Information**

* The total mark for this paper is **31**. There are **9** questions.
* Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2017–November 2019 examinations.
* The marks for **each** question are shown in brackets  
  *– use this as a guide as to how much time to spend on each question.*

**Advice**

1. Read each question carefully before you start to answer it.
2. Keep an eye on the time.
3. Try to answer every question.
4. Check your answers if you have time at the end.

**1** Ellie makes hats.

She makes at least 17 hats per hour.

She is paid 46p for each hat she makes.

Reaze is a waiter.

He works 35 hours and is paid a total of £266.

Show that Ellie’s hourly rate of pay is more than Reaze’s hourly rate of pay.

**(Total for Question 13 is 3 marks)**

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**2** Bronwin works in a restaurant.

The table gives her rates of pay.

|  |  |
| --- | --- |
| **Day** | **Rate of pay** |
| Monday to Friday | £8.40 per hour |
| Weekend | £11.20 per hour |

Bronwin worked for a total of 20 hours last week.

She worked 8 of these 20 hours at the weekend.

Show that Bronwin was paid less than £200 last week.

(**Total for Question 2 is 3 marks**)

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3** Adam gets a bonus of 30% of £80

Katy gets a bonus of £28

Work out the difference between the bonus Adam gets and the bonus Katy gets.

£.......................................................

**(Total for Question 3 is 3 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**4** Sean works for a company.

His normal rate of pay is £12 per hour.

When Sean works more than 8 hours a day, he is paid overtime for each hour he works

more than 8 hours.

Sean’s rate of overtime pay per hour is  times his normal rate of pay per hour.

On Monday Sean worked for 10 hours.

Work out the total amount of money Sean earned on Monday.

£.......................................................

**(Total for Question 4 is 4 marks)**

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**5** Azmol is paid £1500 per month.

He is going to get a 3% increase in the amount of money he is paid.

Work out how much money Azmol will be paid per month after the increase.

£......................................................

**(Total for Question 5 is 2 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**6** The table shows a cricket club’s income in 2016 from a fete, a quiz and membership fees.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Income** | | |
| **Fete** |  |  |  | £250 |
| **Quiz** |  | Entry fees | 13 at | £5 each |
|  |  | Refreshments |  | £35 |
| **Membership fees** |  |  | 25 at | £20 each |

Express as a ratio

the income from the fete to the income from the quiz to the income from membership fees.

Give your ratio in its simplest form.

......................................................

**(Total for Question 6 is 3 marks)**

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**7** Gavin, Harry and Isabel each earn the same monthly salary.

Each month,

Gavin **saves** 28% of his salary and spends the rest of his salary

Harry spends  of his salary and **saves** the rest of his salary

the amount of salary Isabel saves : the amount of salary she spends = 3 : 7

Work out who saves the most of their salary each month.

You must show how you get your answer.

(**Total for Question 7 is 4 marks**)

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**8** A bonus of £2100 is shared by 10 people who work for a company.

40% of the bonus is shared equally between 3 managers.

The rest of the bonus is shared equally between 7 salesmen.

One of the salesmen says,

“If the bonus is shared equally between all 10 people I will get 25% more money.”

Is the salesman correct?

You must show how you get your answer.

**(Total for Question 8 is 5 marks)**

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**9** The table shows information about the weekly earnings of 20 people who work in a shop.

|  |  |
| --- | --- |
| **Weekly earnings (£*x*)** | **Frequency** |
| 150 < *x* ⩽ 250 | 1 |
| 250 < *x* ⩽ 350 | 11 |
| 350 < *x* ⩽ 450 | 5 |
| 450 < *x* ⩽ 550 | 0 |
| 550 < *x* ⩽ 650 | 3 |

(*a*)Work out an estimate for the mean of the weekly earnings.

£.....................................

**(3)**

Nadiya says,

“The mean may **not** be the best average to use to represent this information.”

(*b*)Do you agree with Nadiya?

You must justify your answer.

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**(1)**

**(Total for Question 9 is 4 marks)**

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**TOTAL MARKS FOR PAPER: 31**