

ELGIN ACADEMY

Prelim Examination 2005 / 2006

MATHEMATICS Standard Grade - Foundation Level

Paper II

Time Allowed - 40 minutes

First name and initials

Surname

Class

Teacher

Read Carefully

1. Answer as many questions as you can.
2. Write your answers in the spaces provided .
3. Full credit will be given only where the solution contains appropriate working.
4. **You may use a calculator**

1. Jackie is addicted to sending text messages on her mobile phone. Over a week she sent the following numbers of messages.

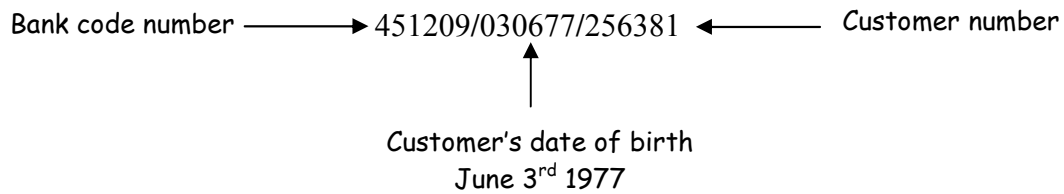
Monday	132
Tuesday	141
Wednesday	136
Thursday	142
Friday	150
Saturday	161
Sunday	153



Calculate the mean number of text messages Jackie sent each day.

(3)

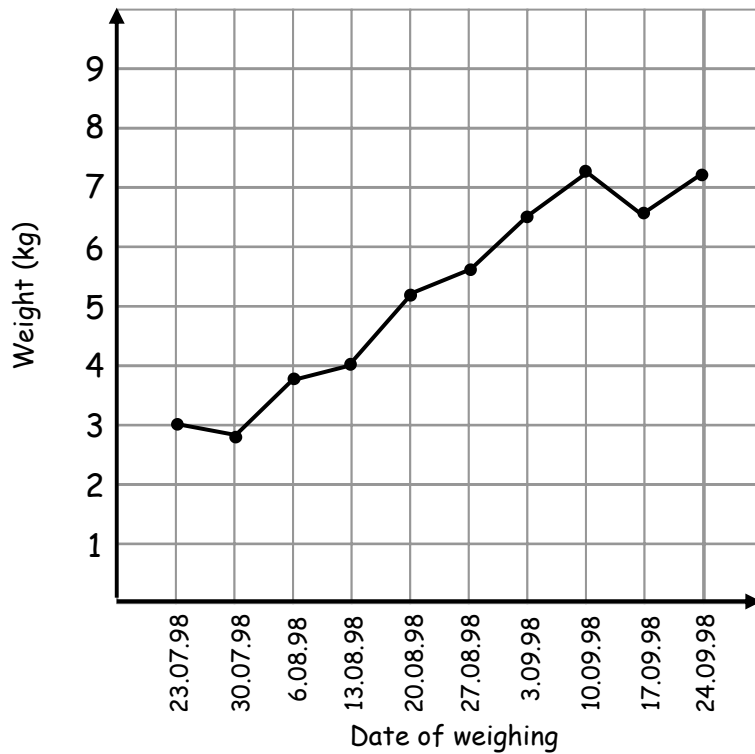
2. The Royal Scottish Bank has a privilege scheme for its customers called Loyalties. Each customer is given a special number which is made up in 3 parts:



Write down the code for customer number 256333 in the same bank who was born on 23rd July 1987.

(2)

3. A baby was born on 23rd July 1998 and had her weight measured every week for the first few weeks of her life. The graph shows the information.



(a) What was the baby's weight when she was born?

(1)

(b) What happened during the first week?

(1)

(c) A baby is supposed to double its birth weight in the first 6 weeks after it is born. Did this baby double her birth weight in 6 weeks?

Give a reason for your answer

(2)

(d) What is the general trend of the graph?

(1)

4. Mrs Weston was training for a marathon. One day she left home at 9.30am and ran at a speed of 13.5km/h for two and a half hours before giving up.

(a) How far did she run in total?

(2)

(b) Mrs Weston went home after her run to get ready for work. She had to leave the house again at 1.15pm.

How long did she spend at home before leaving for work?

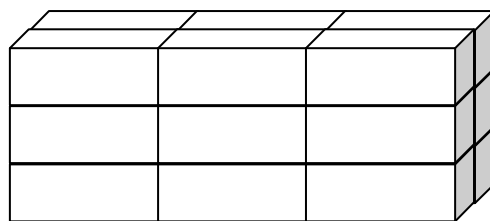
(2)

5. Bob the Builder carries bricks in a hod. Each brick weighs 1.7kg.

For safety reasons Bob is not allowed to carry more than 30 kg at a time.

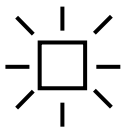
Is it safe for Bob to carry this load of bricks in one load?

You must show your working and give a reason for your final answer.

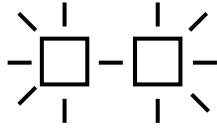


(4)

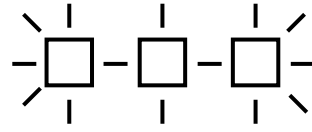
6.



Pattern 1
1 square
8 lines



Pattern 2
2 squares
11 lines



Pattern 3
3 squares
14 lines

The design for the border of a photo frame is based on the pattern above.

(a) Draw pattern 4.

(2)

(b) Complete this table.

(3)

Number of Squares	1	2	3	4	5	6		10
Number of lines	8	11	14					

(c) Write down a rule, in words, for finding the number of lines needed for any pattern number.

(2)

7. Mr and Mrs Morrison are going on holiday. They see these two adverts for the same holiday with two different companies.

<p>BARGAIN HOLIDAYS</p> <p>£270 + TAX</p>
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<p>HOLIDAY BARGAINS</p> <p>£300 TAX included</p>

The rate of TAX is 15%.

Which holiday company is giving the best deal?

You must show working and give a reason for your answer.

(4)	
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8. Stewart works in the local newsagents. One week he worked for 35 hours and got paid £6 an hour.

He had to pay a total of £45 in deductions that week.

(a) How much was his net (take-home pay) that week?

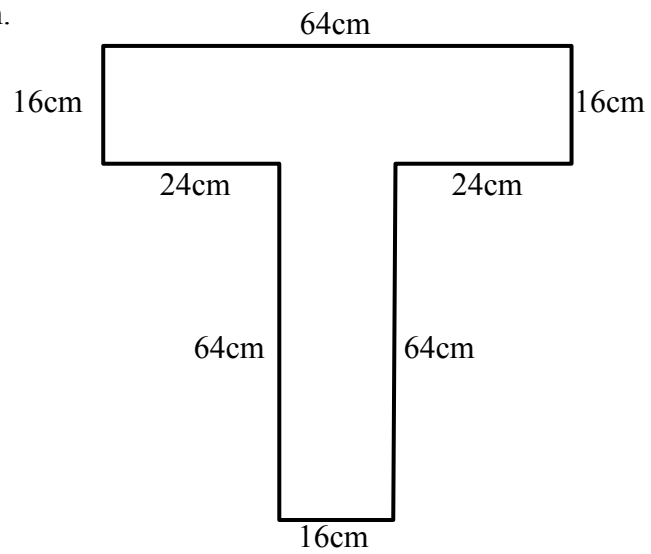
(4)	
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(b) In another week he got paid £1682. If he had no deductions, how many hours did he work that week?

(2)	
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9. A banner is to have a large letter T outlined in gold braid.

The shape is shown in the diagram.



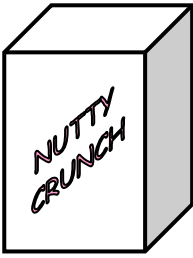
- (a) Find the perimeter of the T – shape.

(2)

- (b) The braiding is sold in metre lengths which cost £4.75 each.
How much will it cost to complete the braiding on the T-shape?

(3)

10.



This cereal box measures 15cm by 7cm by 20cm.

- (a) Calculate its volume in cm^3 .

(2)

- (b) Daniel eats 175cm^3 of cereal every morning. If he opens a new box on a Monday morning, on what day of the week will he eat the last of it?

(3)

