

ELGIN ACADEMY

Prelim Examination 2008 / 2009

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**

	KU	RE
Total Marks for Paper 1		
Total Marks for Paper 2		
Total Marks for Foundation		

1. Julie works as a beauty therapist and gets paid £8.12 an hour. Her basic working week is 35 hours.



(a) Calculate Julie's basic wage each week.

(2)	
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(b) On Thursday evenings Julie works 4 hours overtime and on a Saturday morning she works 3 hours overtime. Overtime is paid at DOUBLE time.

Calculate Julie's overtime payment each week.

(2)	
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2. Paul and Sean are collecting supermarket tokens to hand in at their school.

Paul has collected 77 tokens and Sean has 59.

How many tokens should Paul give Sean so that they both hand in the same number of tokens at school?

(3)	
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3. John works out in the gym everyday. Here are the times he spent there one week from Monday to Friday.

Monday: 75 minutes
 Tuesday: 46 minutes
 Wednesday: 63 minutes
 Thursday: 81 minutes
 Friday: 65 minutes



(a) How long did John spend in the gym altogether over the 5 days? Give your answer in hours and minutes.

(2)

(b) What was the mean time that John spent in the gym each day?

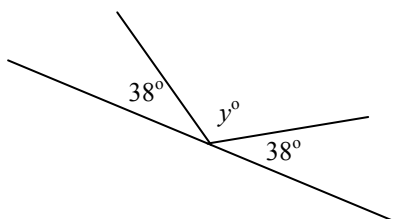
(2)

(c) John's target is to spend at least 7 hours in the gym each week. He spent 50 minutes in the gym on Saturday and 70 minutes on Sunday.

Did he manage to reach his target of 7 hours? Give a reason for your answer.

(2)

4. Calculate the size of the angle marked 'y' in this diagram.



(2)

5. Pauline and Fiona are both making a 10 minute phone call from their mobile while they are on holiday.

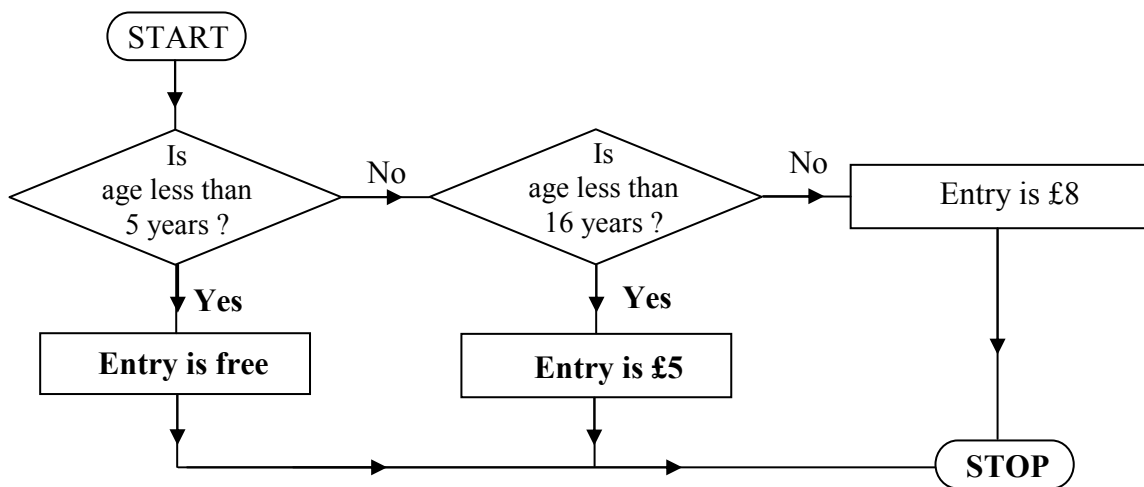
Pauline's phone company charges her 20p connection fee and then 12p per minute.

Fiona's company does not charge a connection fee but charges 15p per minute for the call.

Who pays the smaller amount for their call **and** by how much?

(4)

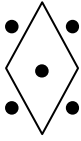
6. The flowchart can be used to calculate the entry prices to a museum.



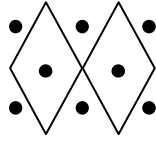
Use the flowchart to calculate how much it would cost Kashaf (aged 8) and his Mum to visit the museum.

(3)

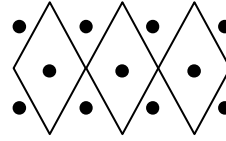
7. Milly bought a new top which has some coloured glass diamonds and beads round the neck. Here is how the pattern is built up.



Pattern 1
1 Diamond
5 Beads



Pattern 2
2 Diamonds
8 Beads



Pattern 3
3 Diamonds
11 Beads

(a) Complete the table for the number of diamonds and number of beads in other patterns.

Number of Diamonds	1	2	3	4	5		10
Number of Beads	5	8	11				

(3)

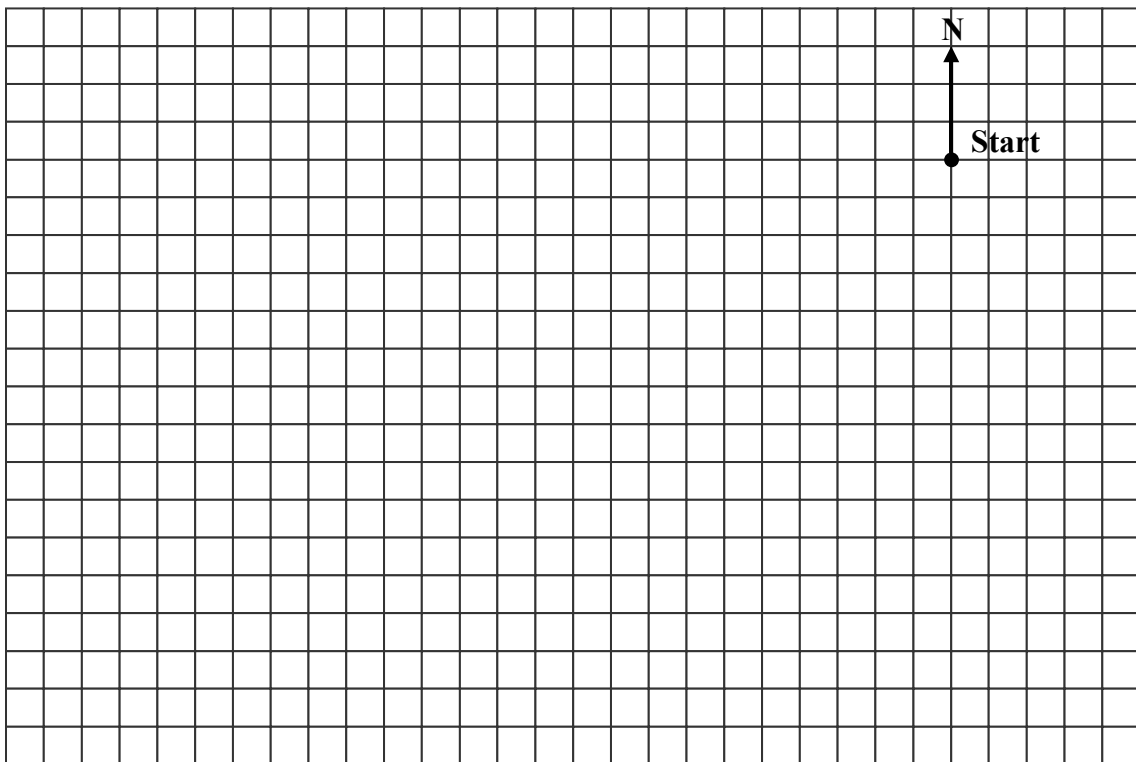
(b) Write down a rule, in words, for finding the number of beads needed for any number of diamonds.

(2)

8. Joshua is taking part in a beginner's orienteering course. He is given this set of instructions at the starting point.

Direction	Distance
West	180m
South	100m
East	80m

- (a) Make a scale drawing of Joshua's route, on the grid below, starting at the dot (●). Mark the end point with a cross. (X) Use a scale of 1cm represents 20m. (3)



- (b) Use your diagram to find out how far Joshua would have to travel to return directly to the start. Give your answer in metres. (2)
- (c) If Joshua wanted to return directly to the start, in what direction would he have to travel? (1)

9. Ashlyn is training to run her first marathon. One day she planned to run 30km.

She ran for $2\frac{1}{2}$ hours at an average speed of 8km/h.

How far did she still have to run so that she completed the 30km?



(3)

10. 130 people entered a dancing competition.

14 won gold awards, 25 won silver and 36 won bronze.

(a) How many people DID NOT win an award?



(2)

(b) Team points were awarded as follows:

- Gold award: 5 points
- Silver award: 3 points
- Bronze award: 1 point

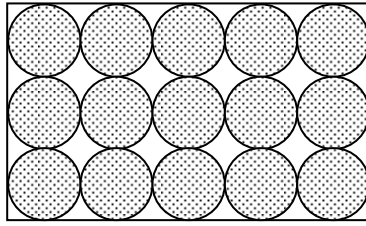
The Prancers and the Twirlers were the top two teams.

The Prancers won 6 gold awards, 2 silver and 7 bronze. The Twirlers had a total of 44 points.

Which team won the competition and by how many points?

(3)

11. Tealight candles are packed in boxes of 15. Each box has a single layer of candles.



The diameter of a tealight is 4cm.

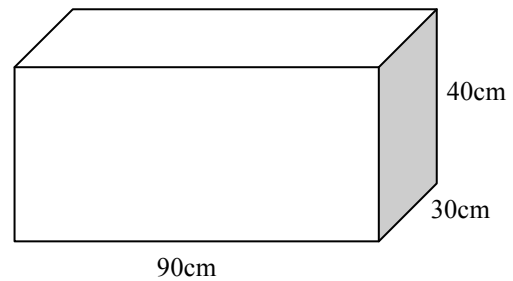
(a) Calculate the length and breadth of the box.

(2)

(b) Use your answers in (a) to calculate the area of the base of the box.

(2)

12. (a) Calculate the volume of this tank.



(2)

(b) How many litres of water will the tank hold when full?

(1)