JAMES ALLEN'S GIRLS' SCHOOL

11+ ENTRANCE EXAMINATION

SAMPLE PAPER

MATHEMATICS

CANDIDATE NUMBER: ……

Time: 45 Minutes

Show all your working in the space for each question.

Do not spend too long on any question. If you are finding a question difficult, move on to the next one.

Do not worry if you are unable to finish all the questions.

NO CALCULATORS ALLOWED

USE PENCIL

1. $\begin{array}{r} 295 \\ 749 + \\ 86 \\ \hline \end{array}$

2. $\begin{array}{r} 1231 - \\ 744 \\ \hline \end{array}$

3. $\begin{array}{r} 576 \\ \times \ 8 \\ \hline \end{array}$

4. $9\overline{)3465}$

5. Natalie buys 3 small bags of peanuts and pays with a £2 coin. She receives 80p change. How much does each bag cost?



Cost:_____

6. Write down the next two numbers in each of these sequences:

a) 30000, 3000, 300, 30, _____ _____

b) 3, 6, 12, 24, _____ _____

c) 1, 1, 2, 3, 5, 8, _____ _____

d) 1, 4, 9, 16, _____ _____

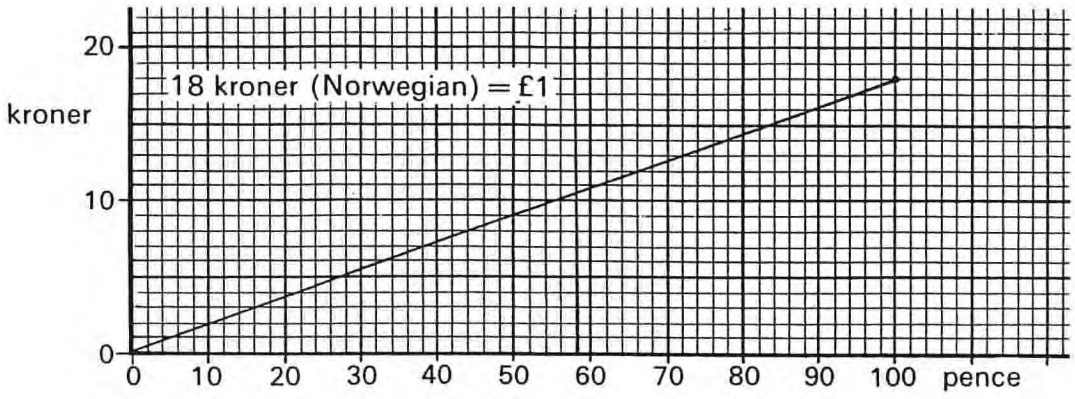
7. Find three prime numbers that add up to 30

Ans:_____

8. Two fifths of the children in a swimming pool are boys. There are 72 girls in the pool. How many boys are there?

Ans: _____

9. The line graph below can be used to change pounds sterling into Norwegian kroner.



a) How many kroner would I get for 90p?

Ans:_____

b) How much are 12 kroner worth?

Ans:_____

c) Jo buys some sweets and a magazine that cost £5 . 10. How much is this in kroner?

Ans:_____

10. Gill's garden is 48 m long and 10 m wide and she wants to cover it with peat which comes in 60 kg sacks. 10 kg of peat covers an area of 20 m^2.

Work out the area of the garden:

Ans:_____

How many sacks of peat does Gill need for the whole garden?



Ans:_____

11. Calculate

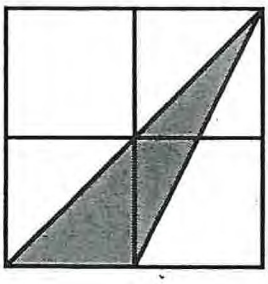
a) $\frac{2}{3} + \frac{5}{6}$

Ans:_____

b) $\frac{5}{6} - \frac{3}{4}$

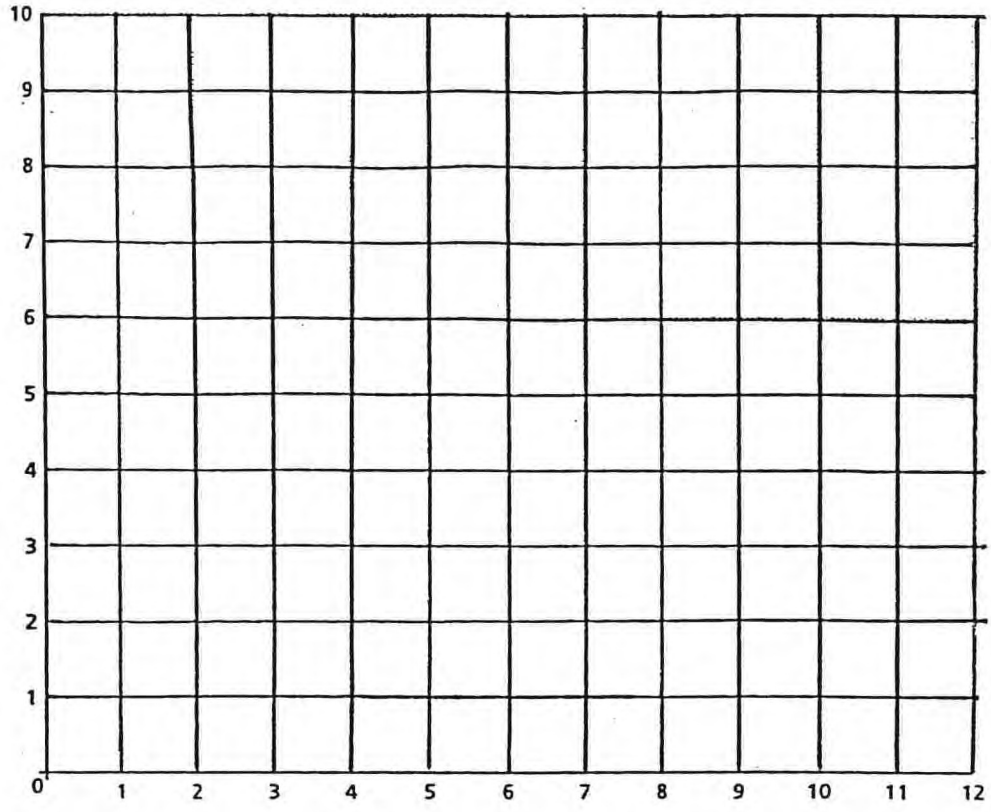
Ans:_____

c) What fraction in the diagram below is shaded?



Ans:_____

12.



The co-ordinates of the three corners of a rectangle are:

A (2 , 0) , B (0 , 4) , C (10 , 4)

Plot these points on the axes above.

Join A to B and A to C to give 2 sides of the rectangle.

Mark corner D on your diagram.

Write down the co-ordinates of D

Ans:_____

Draw all the lines of symmetry of the rectangle on your diagram.

13. Sara starts her maths homework at 4.30 pm and she finishes it at 6.10 pm. During that time she watches 'Neighbours' for 25 minutes and she speaks to her friend Jean on the telephone for 20 minutes. How long is Sara actually working on her maths?

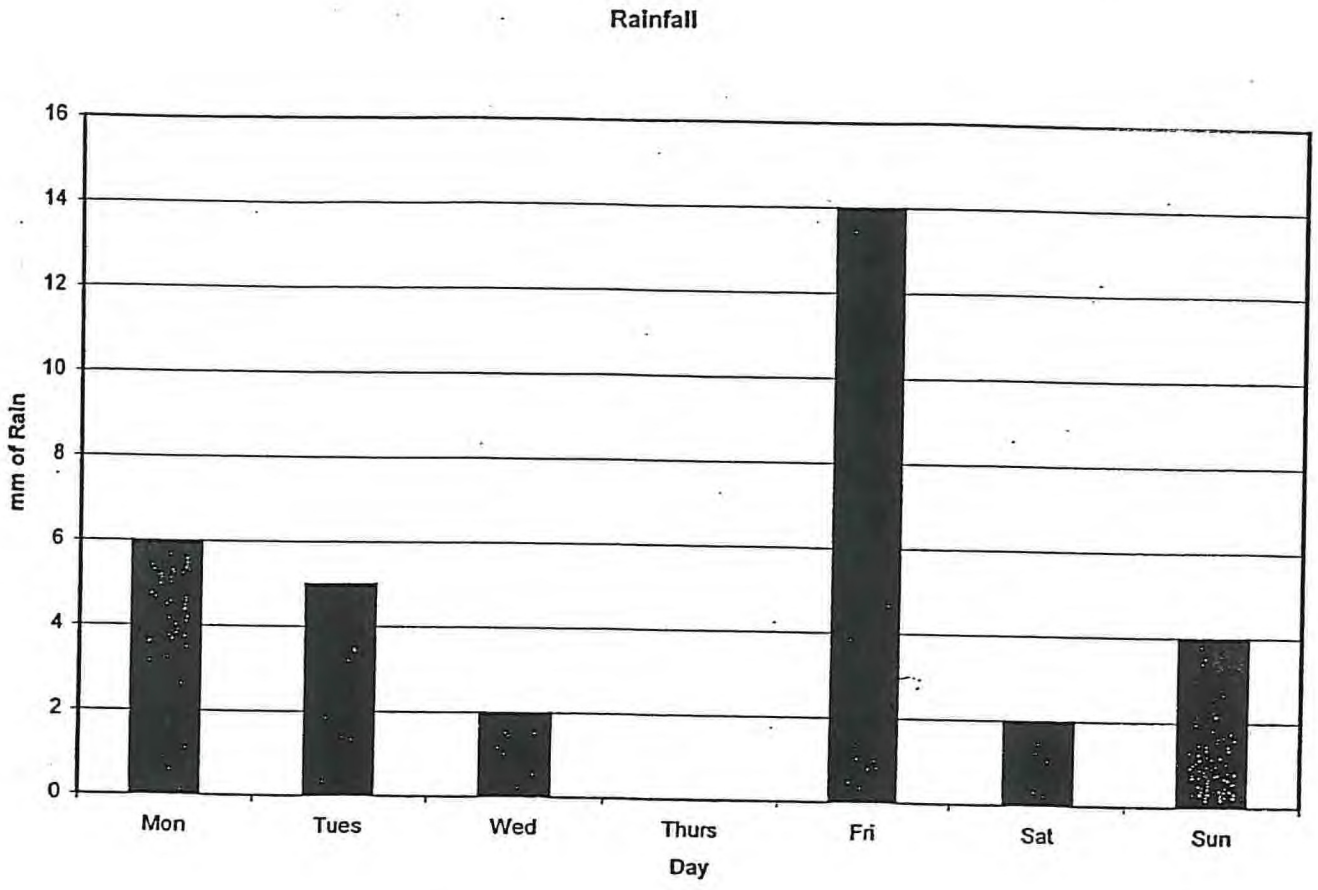


Ans: _____

14. How many 26p stamps can Antonia buy for £10 and how much change will she receive?

Ans: _____

15.



i) What was the rainfall on Tuesday ?

Ans:_____

ii) How much more rain was there on Monday than Sunday ?

Ans:_____

iii) Find the total rainfall for the week ?

Ans:_____

iv) What is the average daily rainfall ?

Ans:_____

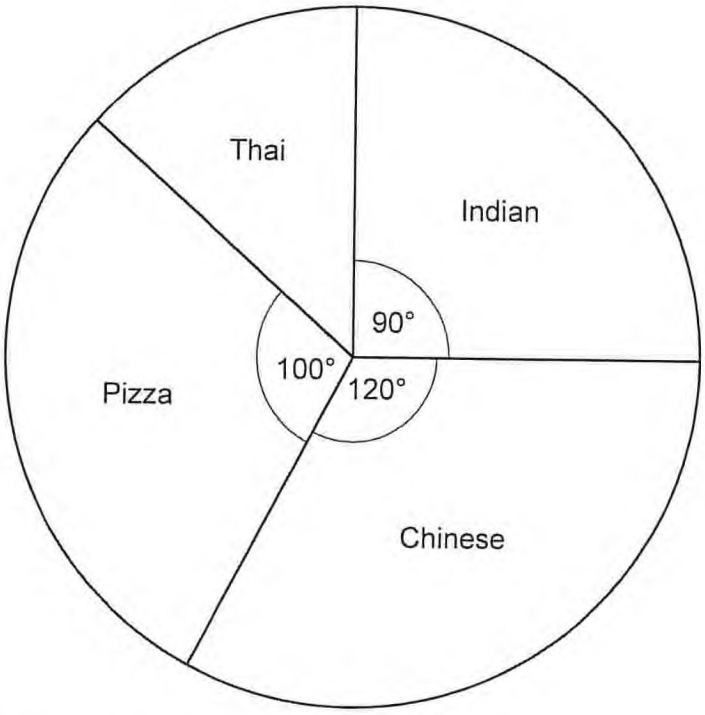
16. Pauline has 90p that she wants to share between 7 girls and 4 boys so that the girls each have twice as much as the boys. How much does each girl and each boy receive?

Girl:_____

Boy:_____



17.



NOT TO SCALE

This pie chart represents the favourite takeaway foods of 180 students.

(a) Which takeaway food was the favourite of $\frac{1}{4}$ of these students?

Ans:_____

(b) What fraction of these students chose Chinese?

Ans:_____

(c) Work out the size of the angle for Thai.

Ans:_____

(d) How many of the 180 students chose Pizza?

Ans:_____

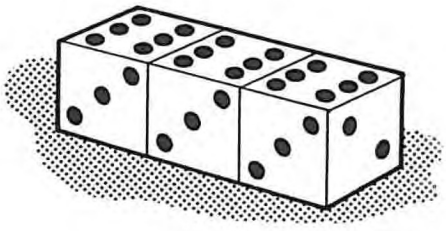


18. To encourage her to tidy her bedroom, Cathy is given 1p on the first day, 2p on the second day, 4p on the third day and so on, doubling the amount each day. How much has she been given after 8 days?



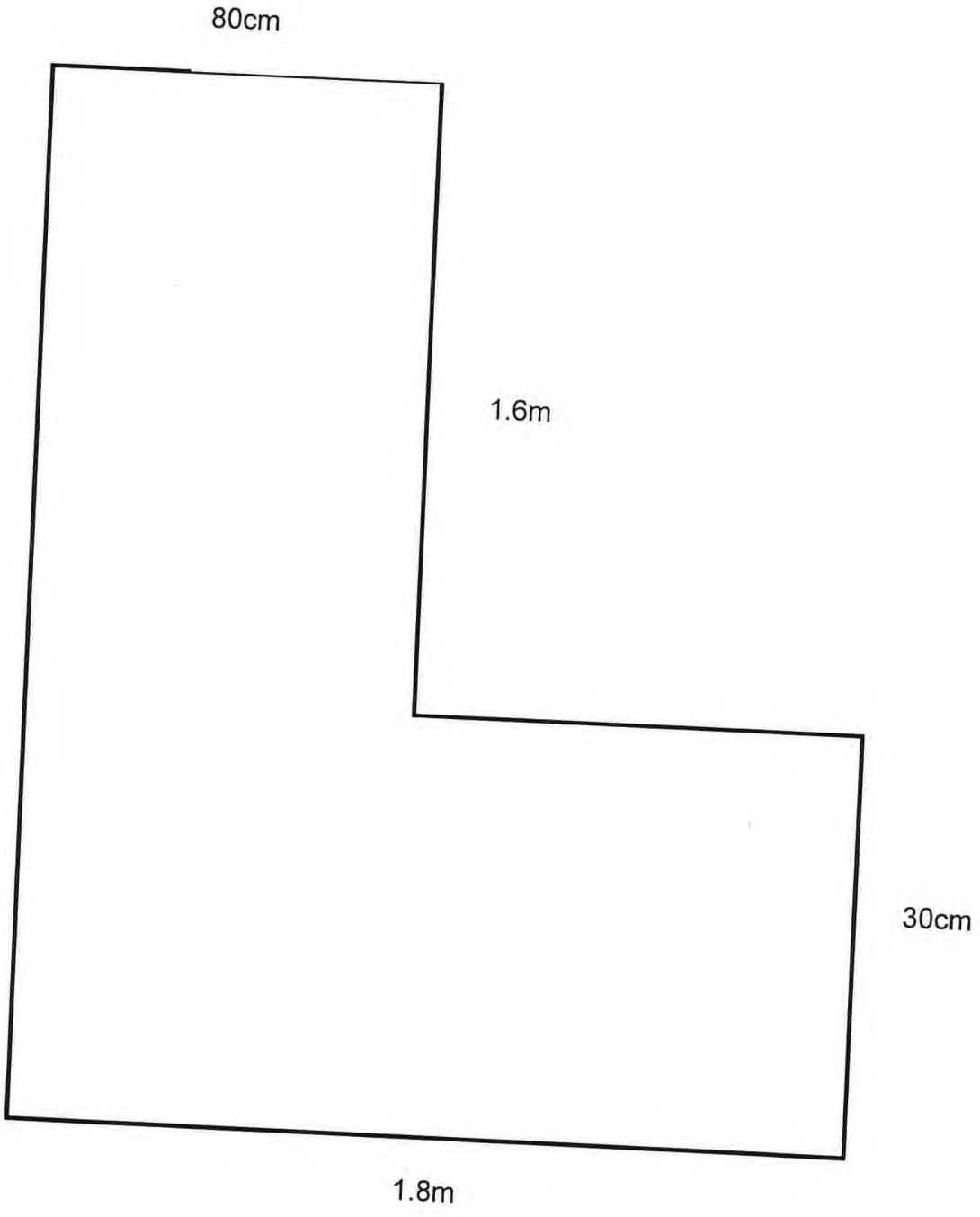
Ans: _____

19. The total of the opposite faces on a dice is always 7. Jack places three dice on a table as shown in the diagram. What is the total score of the faces that Jack cannot see?



Ans: _____

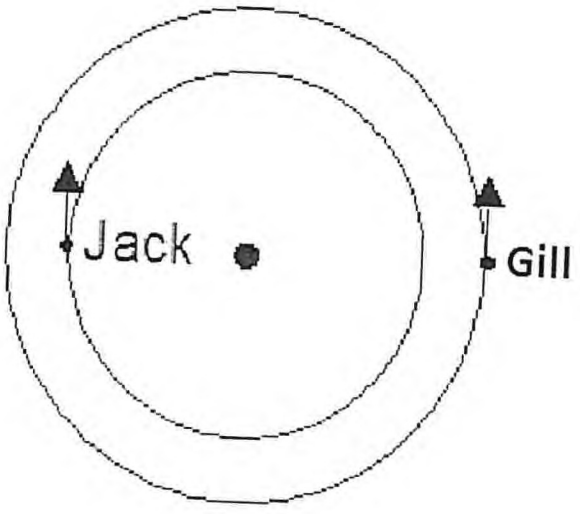
20. Calculate the perimeter of this shape stating your units very carefully



Ans:_____

21. Jack dances clockwise around the Maypole, making one revolution every five seconds.
Starting from a point diametrically opposite Jack's starting point. Gill dances anticlockwise, making one revolution every six seconds.

How many times do they pass each other in the first minute?



Ans:_____