JAMES ALLEN'S GIRLS' SCHOOL

MATHEMATICS ENTRANCE EXAMINATION
11+ SAMPLE PAPER 2

CANDIDATE NUMBER:

....

Time allowed: 45 minutes

Show all your working

Write your answers in the spaces provided.

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

NO CALCULATORS ALLOWED

1.
$$295$$
$$749 +$$
$$86$$
$$\overline{1130}$$

2.
$$1231 -$$
$$744$$
$$\overline{487}$$

3.
$$576$$
$$\times \ 8$$
$$\overline{4608}$$

4.
$$385$$
$$9\overline{)3465}$$

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: 40p

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

a) 30000, 3000, 300, 30, __3__ __0.3__

b) 3, 6, 12, 24, __48__ __96__

c) 1, 1, 2, 3, 5, 8, __13__ __21__
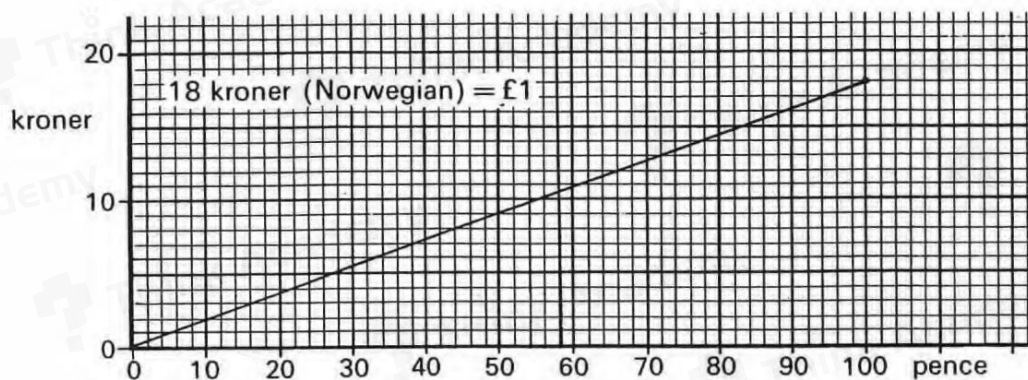
d) 1, 4, 9, 16, __25__ __36__

7.   Find three prime numbers that add up to 30

Ans:_____2,11,17_____

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: _____48_____

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

18 kroner (Norwegian) = £1

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

Ans: 16

b) How much are 12 kroner worth?

Ans: 66p

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

Ans: 91.8 kroner

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 m².

Work out the area of the garden:

Ans:_____480 m²_____

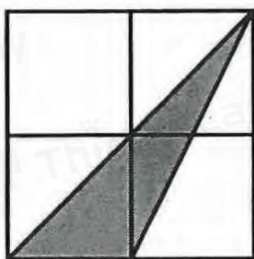How many sacks of peat does Gill need for the whole garden?

Ans:_____4_____

11. Calculate

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

Ans:_____3/2_____

b) $\dfrac{5}{6} - \dfrac{3}{4}$
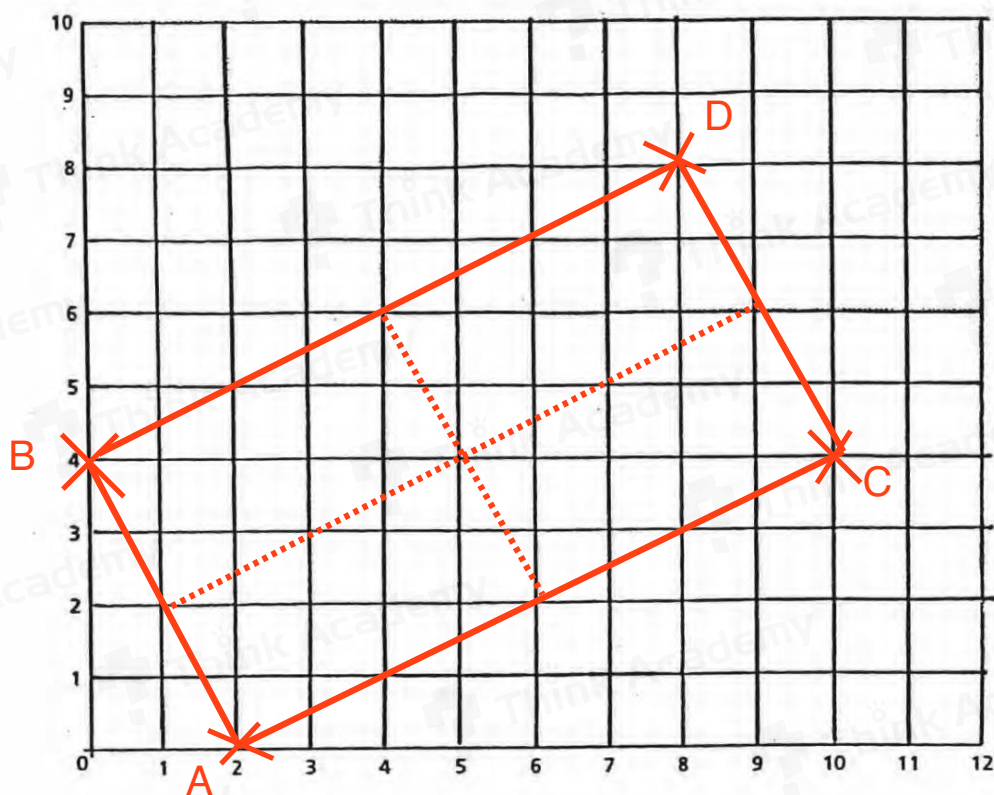
Ans:_____1/12_____

c) What fraction in the diagram below is shaded?

Ans:_____1/4_____

12.

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

$$A(2,0), \quad B(0,4), \quad C(10,4)$$

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:___(8,8)_____

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: _____55 mins_____
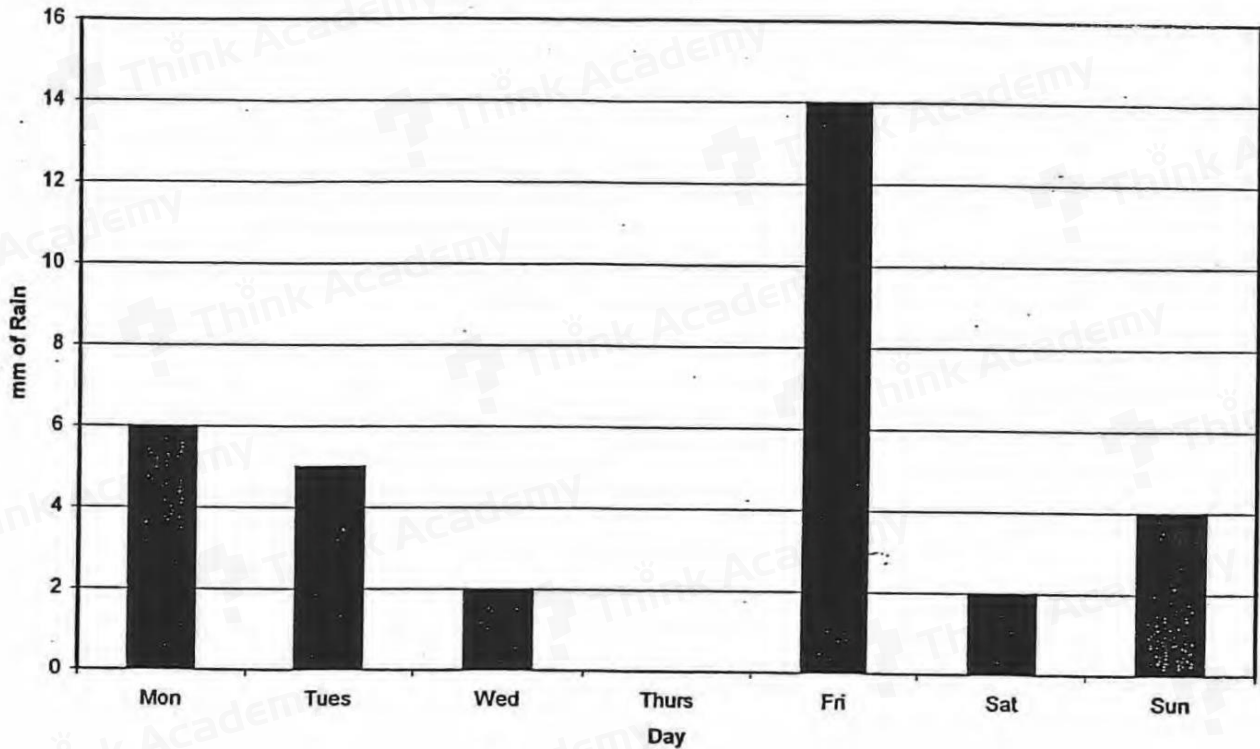
14. How many 26p stamps can Antonia buy for £10 and how much change will she receive?

Ans: _____38 stamps 12p_____

15.

Rainfall

i) What was the rainfall on Tuesday ?

Ans: 5 mm

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

Ans: 2 mm

iii) Find the total rainfall for the week ?

Ans: 33 mm

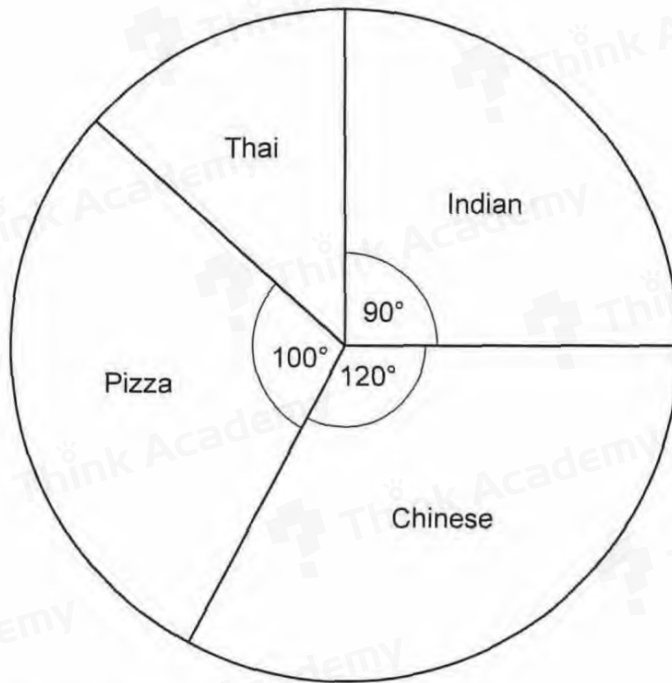iv) What is the average daily rainfall ?

Ans: 33/7 mm

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:___10p_____

Boy:___5p_____

17.

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: Indian

(b) What fraction of these students chose Chinese?

Ans: 1/3

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

Ans:_____50°_____

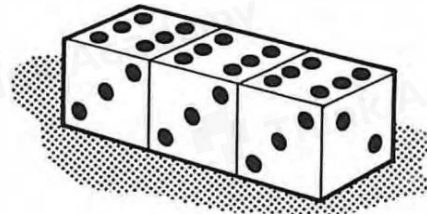(d) How many of the 180 students chose Pizza?

Ans:_____50_____

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?
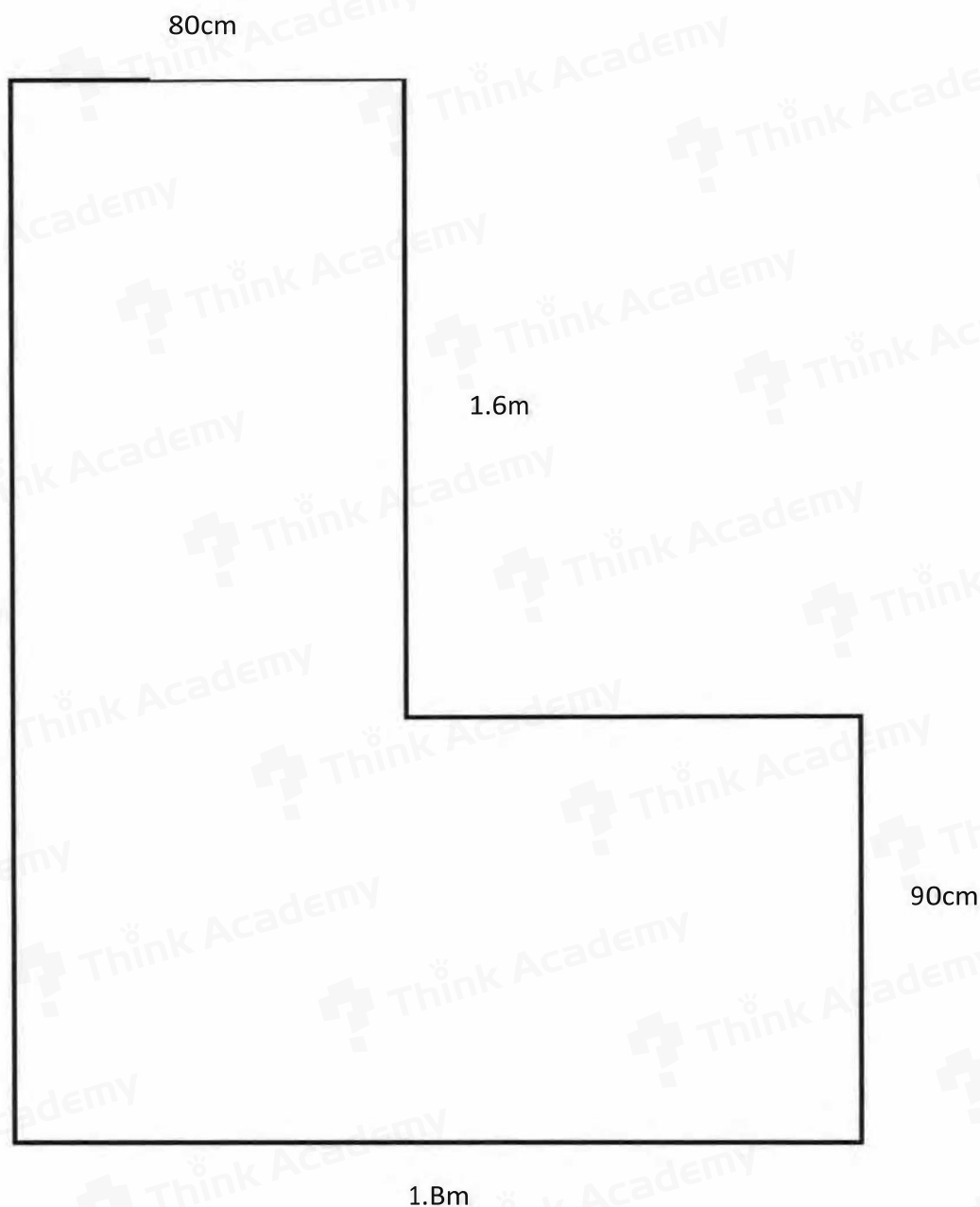
Ans: ___256 p_____

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: ___17_____

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

80cm

1.6m

90cm

1.Bm

Ans: __ __ __ __ __ 8.6 m __ __ __ __ __ __

20b. How many square tiles measuring 20cm by 20cm would I need to buy in order to tile the area? Show clear stages of working.

Ans: 7 7 _____