Alleyn's

11+ MATHS

SAMPLE EXAMINATION PAPER 1

Calculators MAY NOT be used. Show your working, as there may be marks given for working out.

One hour.

Co-educational

excellence

SECTION A - MULTIPLE CHOICE

Circle the LETTER of the correct answer to the questions in this section.

1. How many minutes are there in three and a half hours?

A 4 **B** 60 **C** 210 **D** 180.5 **E** 3600

2. Which of these fractions is equal to 0.8?

A $\frac{1}{8}$ **B** $\frac{4}{5}$ **C** $\frac{8}{100}$ **D** $\frac{0.8}{10}$ **E** $\frac{2}{5}$

3. Which of these is the smallest?

A 0.0801 **B** 0.08 **C** 0.081 **D** 0.08001 **E** 0.0888

4. The most likely length of a television remote control is:

A 0.17cm **B** 1.7cm **C** 17cm **D** 170cm **E** 1700cm

5. 12 - 2 x 4 + 3 =

A 7 **B** -2 **C** 43 **D** 70 **E** 1

6. One of the angles in an isosceles triangle is 30^0. Which of these is a possible other angle in the triangle:

A 90^o **B** 80^o **C** 150^o **D** 60^o **E** 75^o

7. One quarter of the pupils in a class are girls. The rest are boys. What is the ratio of girls to boys?

A 1:1 **B** 1:2 **C** 1:3 **D** 1:4 **E** 1:5

8. How long is it, in hours and minutes, between 09:34 and 13:21?

A 4 hrs 57 mins **B** 3 hrs 47 mins **C** 4 hrs 37 mins

D 22hrs 55 mins **E** 4 hrs 13 mins

9. What is the value of the digit 9 in the number 32.597?

A nine hundred **B** nine **C** nine tenths

D nine hundredths **E** nine thousandths

10. I buy a pen and a pencil for £1.10. The pen costs 50p more than the pencil. How much is the pen?

A 50p **B** 60p **C** 70p **D** 80p **E** 90p

SECTION B

Show your working when answering these questions.

11. (a) 454 + 297 =

(b) 604 – 447 =

(c) 32 x 74 =

(d) 4184 ÷ 8 =

12. (a) $\frac{5}{9} + \frac{2}{9} =$

(b) $\frac{3}{4} + \frac{1}{8} =$

(c) $\frac{5}{6} - \frac{1}{2} =$

(d) $7 - \frac{3}{7} =$

13. Write down the next two numbers in these sequences:

(a) 7, 10, 13, 16, ……., …….

(b) 53, 49, 45, 41, ……., ……..

(c) 6, 10, 15, 21, ……., ……..

(d) 60, 58, 63, 61, ……., ……..

(e) 0.5, 2, 8, 32, ……..., ……

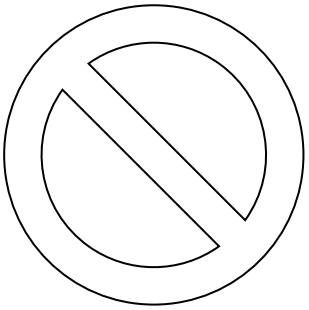
14. Put the following in order, starting with the smallest:

3.55, 53.5, 35.5, 5.35, 55.3, 5.53

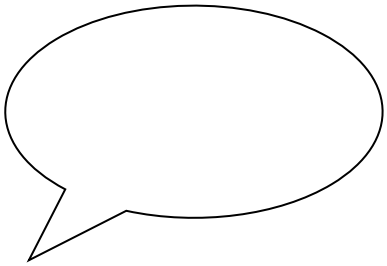
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15. Draw any lines of symmetry on these shapes. Some may have none or more than one.

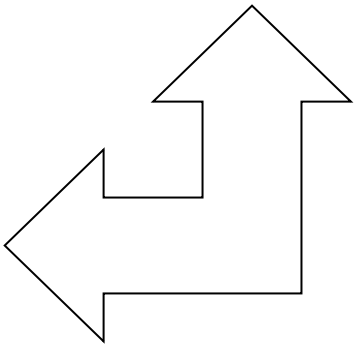
(a)



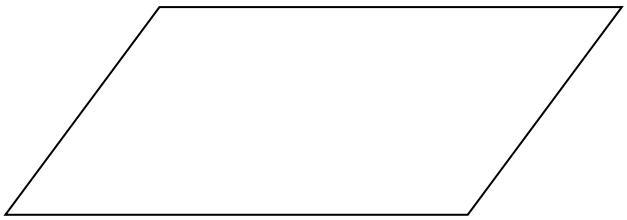
(b)



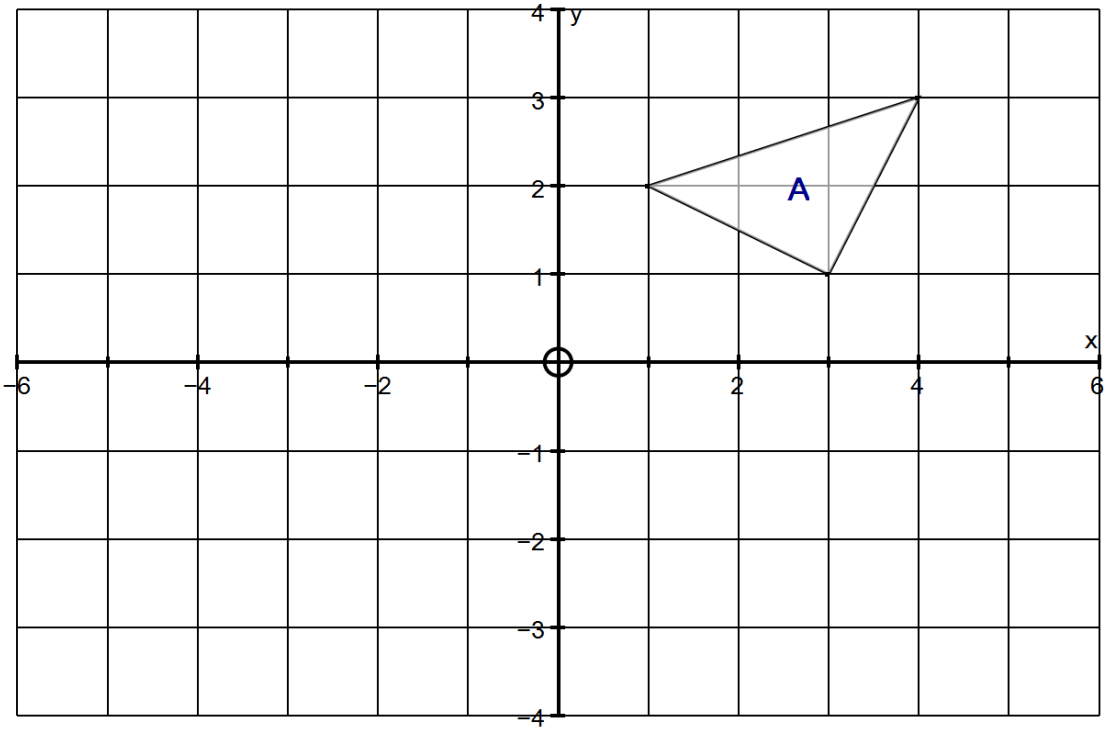
(c)



(d)



16.



(a) Reflect shape A in the x-axis and label the new shape B.

(b) Reflect shape B in the y-axis and label the new shape C.

17. Steve counts the number of goals he scores in six 5-a-side football games. The counts were:

3, 4, 2, 0, 1, 8

(a) What was the mean score for the games he counted?

(b) What was the range?

(c) In the next game he scored enough goals to increase his mean to 4. How many goals did he score in the seventh game?

18. (a) On a train there are 140 men and 200 women. What is the ratio of men to women written in its simplest form?

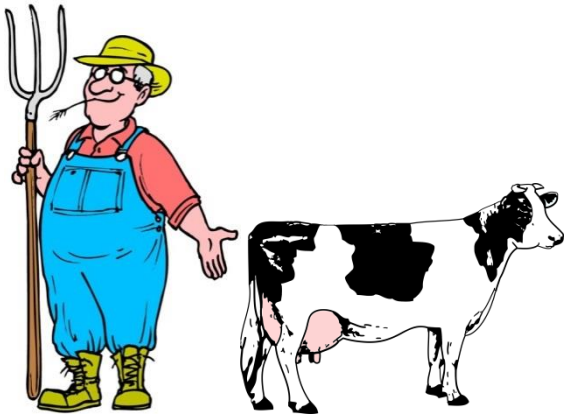
(b) I am making a scale model of The Eye-Full Tower, which is 120m tall. If the scale is 1:50, how long will the model be (in cm)?

(c) My friend Sanjay is making a scale model of the London Ear (a famous landmark in London). The London Ear is 80m tall and his model is 150cm tall. What is the scale of the model, in its simplest form?

19. (a) My other friend Minka was doing some gardening when she snapped a bamboo cane. The cane was 2.05m long and is now 156cm long. What length of cane snapped off?

(b) In her garden, Ying-Ge is sowing some grass seed. The garden has an area of $158m^2$ and each packet has enough seed for $12m^2$. How many packets does Ying-Ge need to buy?

20. Farmer Giles has two legs and each of his cows have four legs. In the picture below, there are six legs in total. Fill in the table below for the total number of legs if Farmer Giles is always present, but the number of cows increases.



Number of Cows	1	2	3	4	10	100
Total Number of Legs	6		14			

Hillary is trying to find a formula that links the Number of Cows, C, to the number of Legs, L. Fill in the gaps to help her:

L = …….. C + ……

21. On my wall I want to put some stickers of my favourite pop star Singing Steve. The space I have available is 55cm by 60cm and the stickers are each 15cm by 5cm. What is the maximum number of stickers I can fit on the wall?

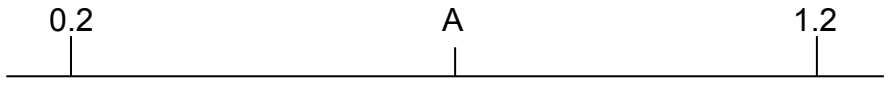
22. Two runners are having a race. Gary starts running from the start line at 10m/s. Two seconds later Andy starts running from the start line at 12m/s.

(a) How long after Gary starts running does Andy catch up with him?

(b) How far are they both from the start line when Andy catches up with Gary?

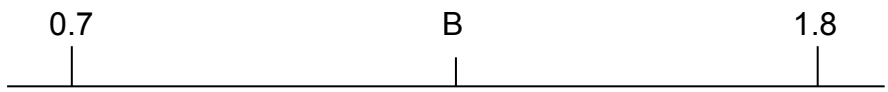
23. These pictures show parts of a scale with equal gaps between each marking. What number should replace each letter?

(a)



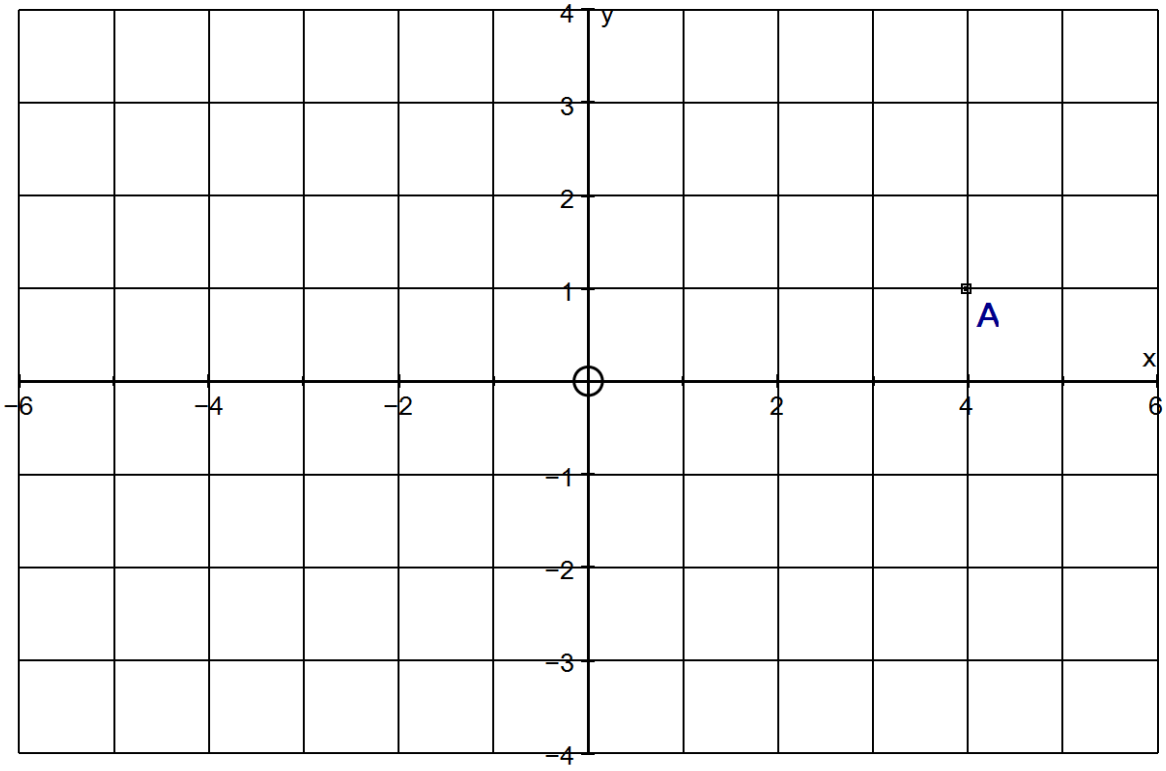
A = ……..

(b)



B = ……..

24.



The point A (4,1) has been marked.

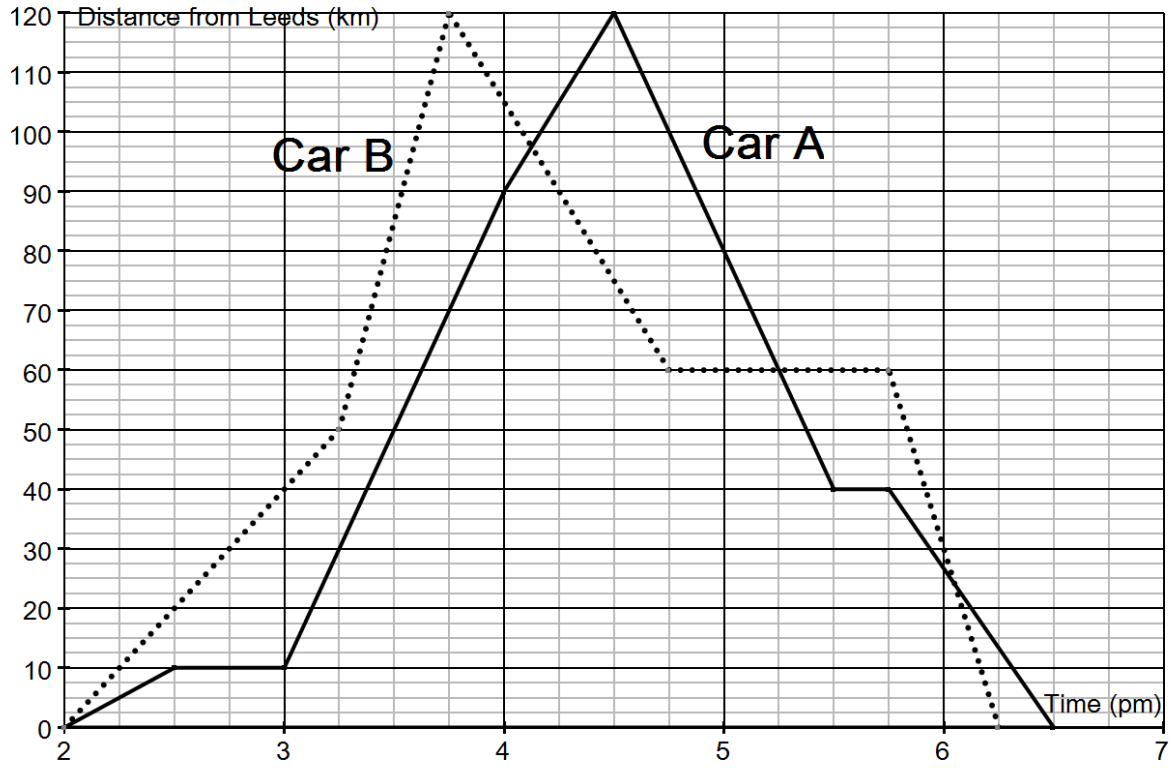
(a) Mark the point B with co-ordinates (0,4)

(b) Mark the point C with co-ordinates (-3,0)

(c) The point D forms a square ‘ABCD’. Write down the coordinates of point D.

(d) What is the area of the square ABCD?

25. This graph shows the progress of two cars in a race from Leeds to Blackpool and back again. Car A is the bold line. Car B is the dotted line.



(a) How far is it from Leeds to Blackpool?

(b) Which car was winning at 3.30pm?

(c) Which car was winning at 4.15pm?

(d) What was the distance between the cars at 4.45pm?

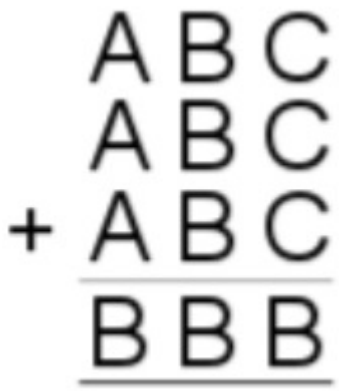
(e) What happened just after 6pm?

(f) Which car achieved the highest speed, and between which times did this happen?

(f) Which car won the race?

26. (a) Can you find numbers to replace A, B and C in this sum?

(A, B and C are all different numbers)



(b) Can you find a four digit number which is reversed when multiplied by 9?

(i.e. ABCD x 9 = DCBA)

END OF TEST – NOW GO BACK AND CHECK YOUR WORK