



# Aldenham School

## 11+ Sample Paper

### Subject: Maths

Name \_\_\_\_\_

School \_\_\_\_\_

Time allowed: 45 mins (+11 mins Extra Time)

#### Instructions:

- Write your answers in the spaces provided in this booklet
- Show sufficient method to show how you obtained your answers
- Calculators **MUST NOT** be used in any question.
- Rulers may be used.

*Work steadily through the paper doing as much as you can straight away, then go back to work at the more difficult questions.*

Mark: \_\_\_\_\_ / 55

1.

(a)  $246 \times 28$

.....  
[2]

(b)  $2460 \div 5$

.....  
[1]

2. 28450 people attended a hockey match.

If 8217 wore red and 11750 wore blue, how many wore neither blue nor red?

.....  
[2]

3. In a year group of 180 students the students all studied one language.  
 $\frac{2}{5}$  of the students studied French,  $\frac{1}{4}$  studied Latin and the rest studied Spanish.

How many students studied Spanish?

.....  
[2]

- 4 Fill in the gaps

a)  $94 - \dots = 65$

b)  $\dots \times 40 = 360$

c)  $\dots \div 0.5 = 20$

d)  $-35 + \dots = -26$

[4]

5. Find the smallest number of coins I can be given in change when paying a bill for £2.34 with a £5 note.

.....  
[2]

6. Sophie and her friends decided to raise money for charity by baking and selling cookies. They set themselves a target of £200 profit to raise. Each cookie cost them 10p to make and they sold them for 50p. How many cookies did they need to sell to reach their target?

.....  
[3]

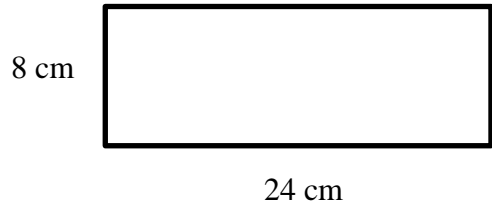
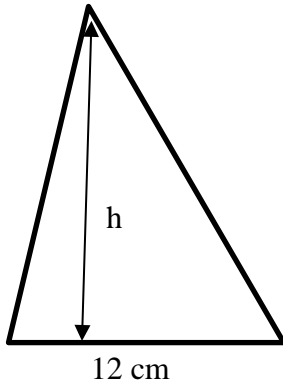
7. 200 items are bought for £2.10. Each are now worth £1.61. Find the total loss.

.....  
[2]

8. If Tom is half his mum's age and together their ages add up to 72, how old is Tom?

.....

9.



This triangle and rectangle have the same area. Find the height of the triangle.

.....  
[2]

10. My train left Hocksworth at 8.20 and arrived in Abbleshem at 10.50 later that morning.

10a How long in minutes did the journey take?

.....minutes  
[1]

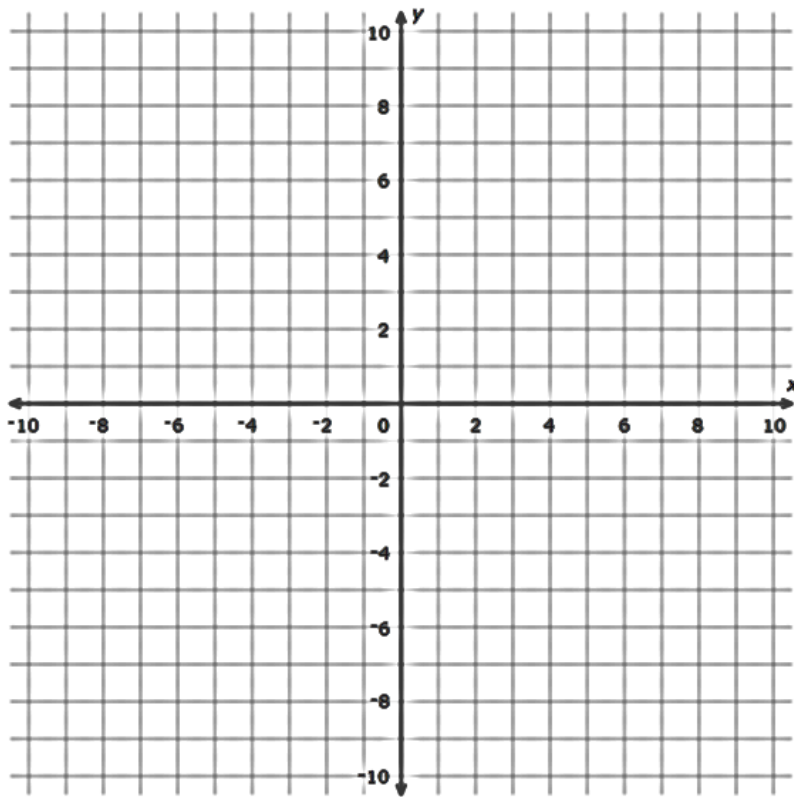
10b Given that Abbleshem is 170 miles away from Hocksworth, what was the average speed of my train?

.....miles per hour  
[2]

11. Three vertices of a kite are  $(-4, 1)$ ,  $(-1, 5)$  and  $(-1, -8)$ .

11a. Plot these points on the axes below.

[1]



11b. Write down the co-ordinate of the missing vertex of the kite.

.....  
[1]

12. Circle the numbers below which are multiples of 7?

44

91

350

789

[1]

13. I wish to cover a wall measuring 2 m by 6 m in tiles which are each 50 cm by 50cm.

13a) How many tiles will I need?

.....  
[1]

13b) If I now choose to use tiles which are 40cm by 20cm how many of these smaller tiles will I need?

.....  
[2]

14. Work out  $\frac{4}{5} + \frac{7}{10}$  then write your answer as a mixed number.

.....  
[2]

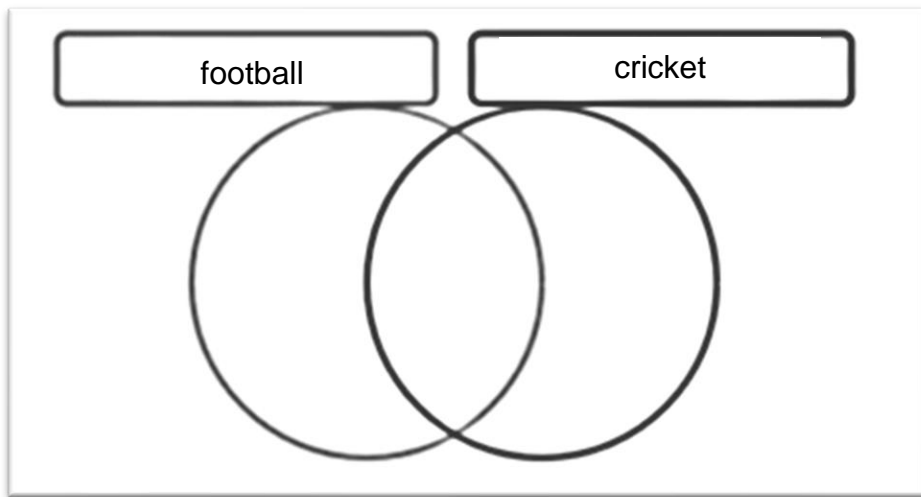
15. What is half of 3.08?

.....  
[1]

16. Rahan did a survey amongst her 18 friends.

- 9 of her friends liked football, 12 liked cricket.
- 2 liked neither.

How many of her friends liked **football and cricket**?



(Use the Venn Diagram to help you.)

.....  
[2]

17. Given that  $a = 5$ ,  $b = 10$  and  $c = 2$  complete the following expressions with  $<$ ,  $>$  or  $=$ .

17a.  $a + b$  .....  $b - a$

17b.  $c + b \div a$  .....  $2(a - c)$

17c.  $2a^2$  .....  $ab$

[3]

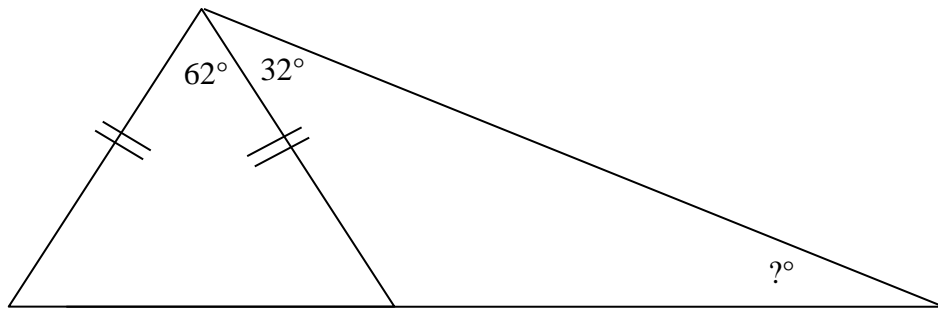


18. Put these fractions in ascending order of size.

$$\frac{3}{5} \quad \frac{12}{18} \quad \frac{9}{10} \quad \frac{14}{20}$$

.....  
[2]

19. Work out the angle marked ?.



? = .....  
[2]

20a. I am thinking of a number.

If I add 6 then double it I get 46.

What number am I thinking of?

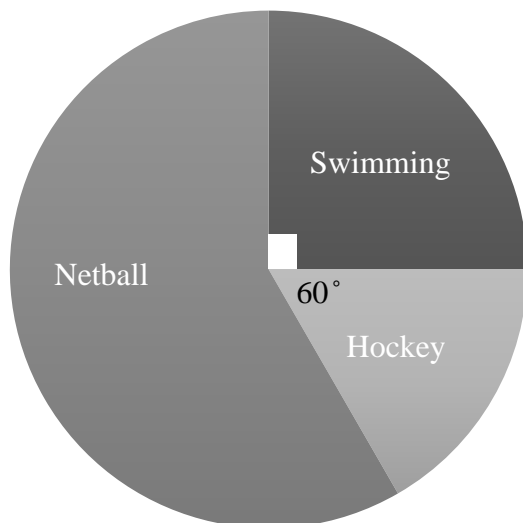
.....  
[1]

20b. Solve the following equation to find x.

$$9x - 17 = 37$$

x = .....  
[2]

21. Students in 6C were asked about their favourite sports. The results are displayed in the pie chart below.



36 students chose hockey.

How many students chose swimming?

.....  
[2]

22. Find for which of the 2-digit square numbers the sum of the digits is greatest.

.....  
[1]

23. George plants a tree in his garden which is initially 180 cm high. After the first year it has increased in height by 30%. During the following year its height increased by 25%. How tall is the tree at the end of the second year?

.....  
[3]

24. Mr Bevestock has a square garden which is  $81\text{m}^2$ . He decides to put a post every 1 m around the perimeter of his garden from which to hang decorations. How many posts will he need?



.....  
[2]

25. From the clues, work out the number that fits into the boxes.
- All the digits are different.
  - The first digit is odd and larger than the third digit.
  - The fourth digit is three times the first
  - The final digit is the product of the second and the third digit.

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[3]

END