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Maths paper 6

**INDEPENDANT SCHOOL EXAM  
11 + EXAM  
PRACTICE PAPERS  
21 EXAM PAPERS  
2300 QUESTIONS**

Includes 10 Verbal reasoning, 6 Maths and 5 mixed question papers.  
Just like taking the real exam. Answer sheets are included along with all  
the correct answers.

**PACK 2.**

This Maths paper contains 50 questions.  
You have 50 minutes to complete the test.  
Mark all answers clearly on the answer sheet.

### Basic Arithmetic

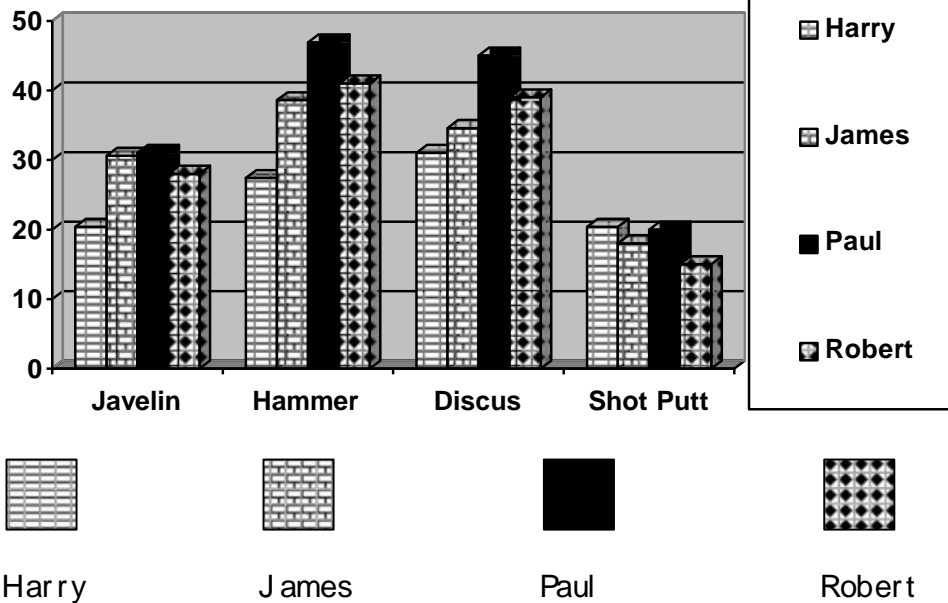
1. What is  $44 \times 2 - 17$ ?
2. Write 7,187 as a word.
3. If I eat twice as many apples a day as my friend, and my friend eats 1 apple a day. How many do we eat altogether in a week?
4. What measurement would you use for the distance from here to London?  
millimetres      kilograms      metres      kilolitres      kilometres
5. If half of me add three is 18 what number am I?

### Time

6. How many days will my sister take to read a book if she reads 12 pages a night and the book is 192 pages long
7. If I swim for 48 minutes each night how long will I spend swimming over two weeks (give your answer in hours and minutes)
8. The train leaves at 8.35 and takes 44 minutes to reach the next station. What time will it arrive?
9. My dad's watch is running 13 minutes slow, so when he should be picking me up at 19.25 what time does he actually get there?
10. I wake up 30 minutes earlier than normal from Monday to Friday to make sure I am on time for school. How much less sleep have I had by the end of the week than I would normally have?

## Graph

Using the graph below that shows the results in a sports day, answer the questions that follow.



11. Who threw the further in the hammer ?
12. What is Harry's best event ?
13. Which event did Robert come third in?
14. Who do you think strongest athlete was?
15. Roughly how far did Harry throw the javelin?

### Weight and Measurement

16. How many litre bottles can I fill fully if I have 9281 millilitres of water?
17. The train travels 140 miles an hour. How long will it take to travel from Copple to Farrow if they are 350 miles apart?
18. If an apple weighs 200g, an orange 300g and a melon 1kg, how heavy will my basket be in kilograms if I have 5 apples, 3 oranges and a melon in it (give your answer in kilograms)?
19. I used to live 475 metres away from school but after I moved house I live twice that distance. How far must I walk to get to school and back (give your answer in kilometres)?
20. If a wall is 4 metres high and 3 metres wide, how many tiles will I need to build it if each tile is 10cm by 10cm?

### Ratio

21. If there was a cow and a bull in a field and the animals have to be fed on a 1:3 ratio, how much food would the bull get if each cow got 2kg of hay a day?
22. When you make juice it is best to make it on a ration of 1:4 water to juice. If the total amount I want to make is 200ml it how much juice do I need to put in?
23. On a school trip you must have 1:15 staff to students. If there are 48 people on the trip altogether how many will be staff?
24. In a class the boys outnumber the girls 3:2. If there are 35 students in the class how many of them are boys?
25. If sandwiches are made on a ratio of 2:3:5 for bread:ham:pickles how much bread will I need if I use 21 pieces of ham.

### Equations

26.  $63 - 27 - 5 = 7 \times 3 + 4 + (?)$

27.  $13 \times 4 \div (19 - 17) = 42 - 18 + (?)$

28.  $6 \times 7 - 24 = 6 \times 6 \div (?)$

29.  $(11+17) \times 2 = 8(3+4) \times (?)$

30.  $(77 - 23) \div 2 = 12 \times 3 - 8 - (?)$

### Numbers in the middle

Each number in the middle has been made using the numbers on each side in a set way. There has been a maximum of two steps to work out the number.

31. 18 (35) 17            14 (30) 16            7 (?) 19

32. 64 (28) 36            24 (11) 13            35 (?) 13

33. 7 (42) 3            6 (84) 7            9 (?) 3

34. 12 (32) 4            8 (12) 6            23 (?) 3

35. 14 (40) 12            13 (45) 19            7 (?) 14

## Probability

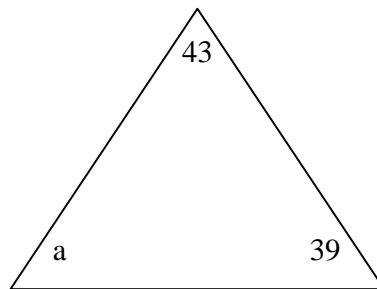
36. There are six marbles in a bag. 3 are white, 3 are blue. What is the probability of drawing a white marble from the bag?
37. When I take the marble out if it is white and I don't put it back in, what is the probability of me drawing out a blue marble now?
38. When choosing lottery numbers what is the best method?
- Use your favourite birthdays
  - Use the same numbers week after week
  - Use last week's numbers
  - Use a lucky dip
  - They are all the same
39. If I toss a coin what are the chances of me getting heads?
40. If I toss the coin two times what are the chances of me getting heads twice?

## Number Sequences

What number comes next in these sequences?

41. 18 27 35 42 48 (?)
42. 4 8 10 20 22 44 (?)
43. 19 15 23 19 27 23 31 (?)
44. 8 8 16 24 40 64 (?)
45. 78 66 54 42 30 18 (?)

### Shapes and Angles



46. What is the value of 'a'? (not drawn to scale)

47. If I add the degrees in a circle to the degrees in a triangle what result do I get?

48. If the hands on a clock are both pointing up to 12 and I turn the small hand 45 degrees clockwise, what time will the clock show?

49. If I wanted to work out the area of a triangle which formula would I use?

A: Base x height B:  $2(\text{base} \times \text{height})$  C:  $\frac{1}{2}(\text{base} \times \text{height})$  D: None of these

50. Which shape is most related to a triangle?

A: pentagon B: rhombus C: cube D: pyramid

## Mat hs Paper 6 – Answer sheet

1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24



25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50