

Paper A. 2016

Numeracy Paper 11+

Name.....

Candidate Number.....

Seat Number.....

This is a multiple-choice test.

Please fill in the details on the multiple-choice answer sheet.

This numeracy paper contains 40 questions, which you have 40 minutes to complete.

Clearly fill in the answers on the multiple-choice answer sheet. Erase any mistakes.

For working out, you can use this paper or the rough paper supplied.

ElevenPlusMock.org.uk

Q1. Ben goes to watch a play that is one and a half hours long. It starts at 3.15p.m. Ben looks at his digital watch and it says 16.35. How much longer is it until the play finishes? Mark your answer on the answer sheet.

Q2. Mrs. Smith has eight kilos of apples. One kilo is enough to make half a litre of concentrated juice. One litre of concentrated juice is enough to make 8 glasses of squash. How many glasses of squash is Mrs. Smith able to make?

Q3. What is one thousand and twenty one plus five hundred and two?

Q4. What is $\frac{1}{2}$ of a $\frac{1}{4}$?

Q5-Q9.

The table shows the results of seven children on sports day.

The time is recorded for the sprint, and also the distance for throwing a ball.

If a child finishes first, they score 7 points. Second place is awarded 6 points, 3rd place 5 points and so on. Last place scores one point.

In the event of a tie, both children are awarded the same points.

The final positions are recorded. Answer the questions below:

Name	Age (years)	Race time (secs)	Distance thrown (m)	Score	Position
Anish	8.5	30	24		3rd
Barbara	9.25	28	19	6 + 2	
Carmen	10	32	20	1 + 4	6th
Dan	7.75	31	18	2 + 1	
Emily	9	29	23	5 + 6	2nd
Fiona	8	29		5 + 4	4th
Guy	10.25	27	22	7 + 5	1st

Q5. What is the range in age in months?

Q6. Which numbers have been left out of Anish's score in the fifth column?

Q7. In which position does Dan finish?

Q8. How far does Fiona throw the ball?

Q9. What is the mode of the race times?

Q10. In a survey of children, 75% said they prefer milk chocolate to dark chocolate. If 30 children prefer milk chocolate, how many children are there in total?

Q11. I think of a number N . I multiply it by 3 and then subtract 7. The result is 20. What is the number N that I first thought of?

Q12. Five people are in a hot air balloon. The total weight of the five people is 600kg. Six people are allowed in the balloon, as long as their average weight does not exceed 125kg. What is the maximum weight of a 6th person to be permitted to additionally enter the balloon?

Q13-16.

The table explains five operations in maths that have been made up. Look carefully at the instructions and examples and then answer the following questions 13-16.

Operation	Instruction	Example
toggle	Round the number to nearest 10	57 becomes 60
moggle	Turn a three digit number round	123 becomes 321
soggle	Divide by 3, but ignore any remainder	11 becomes 3
woggle	Add 100 to the number	35 becomes 135
boggle	Double the number	53 becomes 106

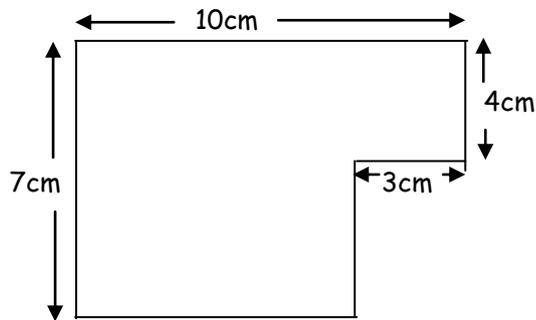
Q13. Start with 13. Toggle it, woggle it and then boggle it. What number do you have?

Q14. Maria starts with 24 and finishes with 50 after two operations? Which two operations could they be?

Q15. After having woggled and then moggled a number, Tia ended up with 721. What was the number she started with?

Q16. If you start with the number 10, what is the highest number you can end up with after all five different operations? You can choose the order of the operations to make the number as large as possible.

Q17. What is the area of the following shape?

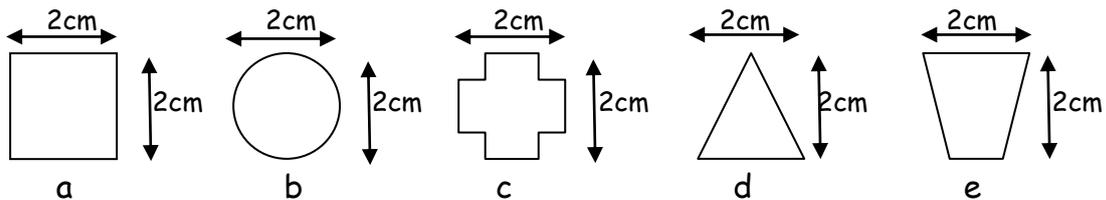


Not drawn to scale

Q18. What is the perimeter of the above shape?

Q19. How many small squares of 5mm x 5mm could fit into the shape above?

Q20. Which of the following shapes has the largest area?



Q21. How many of the above shapes have only one line of symmetry?

Q22. Jamil buys 17 books for £3.99 each. How much change will he receive from £80?

Q23. Three points, A (0,0), B (6,0) and D (1,3) are drawn on a graph. What is the fourth co-ordinate, if the shape ABCD is a parallelogram?

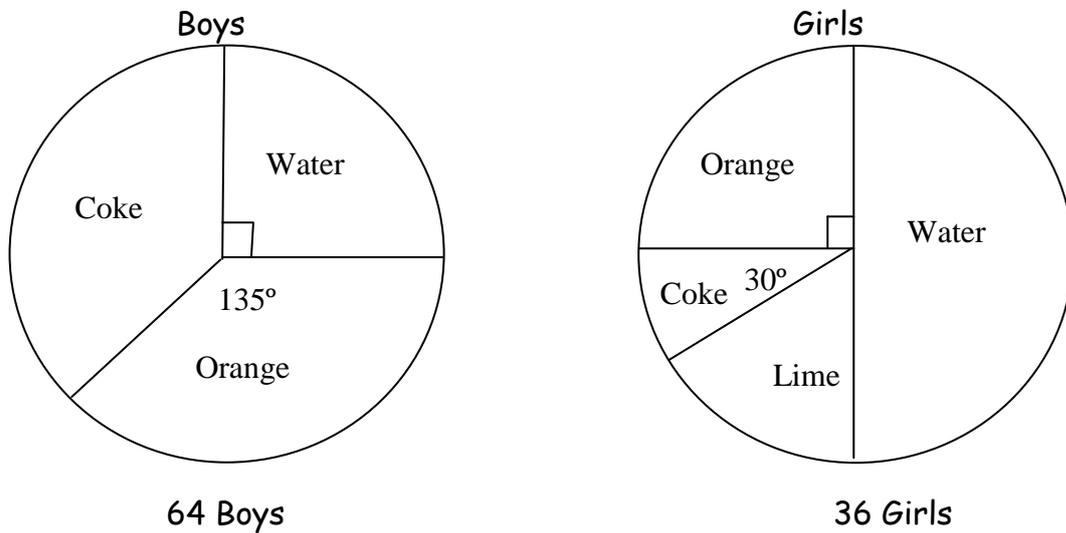
Q24. The science rocket travels 1m every second. To what is that equivalent in km per hour?

Q25. David had a car boot sale. He sold 14 small toys for £1.50p each, and 10 large toys for £2.25 each. How much money did David collect?

Q26. Jay has four crayons, six fountain pens, three pencils and five ballpoint pens. What fraction of Jay's writing implements are crayons?

Q27-30.

The pie-chart shows the favourite drinks of a group of year 6 children. 64 boys and 36 girls were questioned.



Q27. How many more girls prefer water to boys?

Q28. What percentage of the total number of children prefer coke?

Q29. Which is the most popular drink?

Q30. What fraction of girls have chosen lime as their favourite drink?

Q31. What is the next number in the sequence?

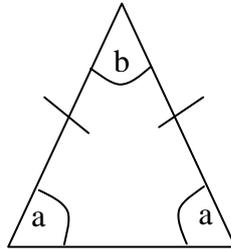
1, 4, 9, 16, 25,

Q32. Maryam decides to walk to and from school on Mondays to Fridays, instead of taking the bus. The bus normally costs 60p each way. How much bus fare will Maryam save if she keeps up this healthy habit of walking to school for four weeks?

Q33. Mr. Dee takes 15 minutes to wash and dress in the bathroom every morning. Then he spends 10 minutes eating breakfast. It takes 25 minutes for Mr. Dee to drive to work. If work begins at 9.00 a.m., at what time must Mr. Dee get up in order to arrive on time?

- Q34.** Four identical bags of flour and two identical bags of sugar weigh a total of 1kg.
If one bag of sugar weighs 100g, how much does one bag of flour weigh?

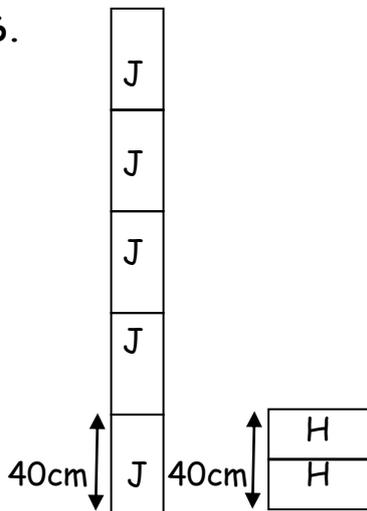
Q35.



Not drawn to scale.

The triangle is isosceles, with angle b half of angle a .
How big is angle b ?

Q36.



Jamil and Harshita have the same sized blocks on which their initials are written.

The blocks are each 40cm tall and Jamil balances five on top of each other, as shown.

Harshita prefers to stack her blocks on their side.

If Harshita manages to stack her blocks 1m higher than Jamil, how many blocks does she use?

- Q37.** Bus A leaves the station at 8.00 a.m. and then every 10 minutes.
Bus B leaves the station at 8.00 a.m. and then every 15 minutes.
Bus C leaves the station at 8.00 a.m. and then every 40 minutes.

What is the next time that all three buses leave at the same time?

- Q38.** If the buses keep the same schedule all day, and the last buses leave at 8.00 p.m., how many A buses left the station that day?

- Q39.** What is the ratio of the number of A buses to the number of B buses that leave the station from 7.55 a.m.-8.55 a.m. ?

- Q40.** What is the total number of buses A, B and C that leave from 7.55 a.m.-8.55 a.m. ?