## Instructions

- Time allowed: 20 minutes.
- There are 20 questions to try to answer in the time allowed.
- Three marks are awarded for every correct answer written on the response sheet. An answer is marked either correct or incorrect so no partial marks are given.
- Marks are not awarded for correct answers that have not been written on the response sheet, so make sure you write your answers on this. Units can be ignored.
- You will have to decide your team's strategy for this speed test and can organise yourselves to answer the questions however you want as quickly as possible.

1. What is the value of $1 \times 2+3 \times 4+5 \times 6+7 \times 8$ ?
2. How many 4-digit even numbers are there which use all four of the digits 1,2,3 and 5.
3. What is $24 \%$ of 125 ?
4. What is 100 minus the sum of the number of positive even numbers less than 100 and the number of positive square numbers less than $100 ?$
5. What is the sum of the number of hours in 40 days and the number of minutes in a day?
6. In a single day, $5 \%$ of my time is spent reading, $30 \%$ is spent sleeping and $20 \%$ is spent at school. I divide the remainder of my time equally between spending time with the family, spending time with friends and playing sports. How many minutes do I spend playing sports?
7. What is the value of $\frac{2 \times 4 \times 6 \times 8 \times 10}{1 \times 2 \times 3 \times 4 \times 5}$ ?
8. The product of three consecutive whole numbers is 990 . What is the sum of the three numbers?
9. It takes 4 students half an hour to write 6 greeting cards. Each student works at the same constant rate. How many greeting cards can be written by 1 student in 2 hours?
10. It is 175 miles from Exeter to London by train. The train does the journey at an average speed of 60 miles per hour. How long does the journey take? [Give your answer in hours and minutes.]
11. Two friends each have 5 pairs of shoes. Each shoe has 2 flowers on it, and each flower has five petals. What is the total number of petals minus the total number of shoes?
12. Which is the largest of the fractions $\frac{4}{7}, \frac{5}{9}$ and $\frac{6}{11}$ ?
13. A rectangle has whole number side lengths, in centimetres. The perimeter of the rectangle is 30 centimetres. How many different areas could the rectangle have?
14. Two apples and a banana cost $£ 1.05$. One apple and two bananas cost 90 p. What is the cost of 5 apples and 5 bananas?
15. What is the sum of the answers to the following calculations?

$$
48 \div 4 \div 2 \div 2, \quad 48+4 \div 2 \div 2, \quad 48 \div 4+2 \div 2, \quad 48 \div 4 \div 2+2
$$

16. How many seconds are there in one-half of a day plus one-third of an hour plus one-quarter of a minute?
17. An anagram of ADDED is DEDAD. Including the word itself, how many anagrams of ADDED are there?
18. What is $10 \%$ of 90 minus $20 \%$ of 80 plus $30 \%$ of 70 minus $40 \%$ of 60 plus $50 \%$ of 50 ?
19. I usually get $£ 5$ pocket money per week but for the next 52 weeks I'm going to get double the usual amount on odd weeks and triple the usual amount on even weeks. How much pocket money will I have received by the end of the 52 week period?
20. A diagonal of a polygon is a straight line, which is not an edge, that joins two vertices of the polygon. A triangle has no diagonals, a quadrilateral has 2 diagonals and a pentagon has 5 diagonals. How many diagonals does an octagon have?


School name


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Award 3 marks for a correct answer.
Final score /60 $\square$
Circle the mark awarded for each question and cross out the other.

