| RALPH:	Hello, Maths Challengers, here we are again for another edition of the mental maths quiz that bumps up your brainbox and puts your grey matter into overdrive! Right, before we can start the quiz proper you need to make sure you've got pencil and paper handy to write down your answers.
	OK, we can get the quiz underway, once I've introduced you to my mathmatical mastermind, Matrix!
MATRIX:	Greetings, Maths Challengers!
RALPH:	What mathematical expression have you got for us today, Matrix?
MATRIX:	**Prime number**. A prime number is a number that can only be divided exactly by itself and 1.
RALPH:	Like the number 7? That can only be divided exactly by 7 and 1.
MATRIX:	No doubt about it! 7 is a prime number. So is 13.
RALPH:	Because that can only be divided by 13 and 1.
MATRIX:	You've got it!
RALPH:	Good! In that case I can explain the rules for Round 1. You only get four seconds to write down the answer. Pick up your pencils and get ready to write down the answers. Listen carefully, because the first question is all about prime numbers.

Round 1 - Beat the clock!

Question 1. Which of these numbers is **not** a prime number: 11, 15, 17? Again: 11, 15, 17. Which one is **not** a prime number?

Second question. How many 5p coins in £1.25? How many 5p coins does it take to make £1.25?

Question 3. What is the area of 9cm square? A square with sides 9cm long, what is its area?

Question number 4. What is the total number of sides on a hexagon and a quadrilateral added together? Add the number of sides of a hexagon onto the number of sides of a quadrilateral.

Fifth question. What is 5% of £2? 5% of £2. What is it?
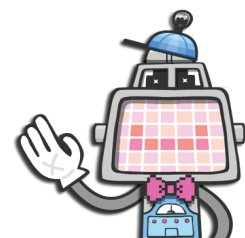
Question 6. Which decimal is halfway between 0.1 and 0.2? Which decimal value is exactly halfway between 0.1 and 0.2?

Seventh question. How many kilograms in half a metric ton? Half a metric ton is how many kilograms?

Question 8. If 12 - K = 3, what is K? What is K when 12 - K = 3?

Question 9. How many 40cm lengths make up 2m? How many 40cm lengths are there in 2m?

Last question, number 10. Total the days in November and December. Add together the number of days in November and the number of days in December.

And that brings us to the end of round one, because here come...

MATRIX:	The answers!
RALPH:	Mark them right or wrong.
RALPH:	Number 1.
MATRIX:	Answer: 15.
RALPH:	Number 2.
MATRIX:	Answer: 25.
RALPH:	Number 3.
MATRIX:	Answer: $81cm^2$.
RALPH:	Number 4.
MATRIX:	Answer: 10.
RALPH:	Number 5.
MATRIX:	Answer: 10p.
RALPH:	Number 6.
MATRIX:	Answer: 0.15.
RALPH:	Number 7.
MATRIX:	Answer: 500.
RALPH:	Number 8.
MATRIX:	Answer: 9.
RALPH:	Number 9.
MATRIX:	Answer: 5.
RALPH:	And finally, number 10.
MATRIX:	Answer: 61.
RALPH:	10 answers to 10 questions and 10 points if you got them all right! Each correct answer is worth 1 point. So add up your first round score!

OK, so now you have your scores for the first round worked out we can get moving on to...

Round 2 - Let's go to the zoo!

The fact is your school has been very lucky. It's received 63 tickets to get into the zoo for nothing! But who's going to get the tickets? The head teacher decides that each of the eight classes in your school will get the same number of tickets. And this is the first question, so listen carefully. I want to know how many of those 63 tickets will each of the eight classes get and how many will be left over. So if 63 tickets are divided equally amongst each class, how many will each class get and how many will be left over? Work out your answer now.

Alright, Matrix - how many lucky people in each class are going to get a ticket?

MATRIX: There are 63 tickets altogether and eight classes. 63 ÷ by 8 = 7, remainder 7. This means that each class will get 7 tickets for the zoo and there will be 7 tickets left over.

RALPH: That's it then. The answer we were looking for is 7 tickets for each class and seven spare tickets. So, five points if you got both parts of that answer right. Time for the zoo then. Come on, Matrix, let's go!

And here we are! The problem is everybody wants to go and see different animals first. So you're going to have to split up. And this is question 2, so pay attention. Some of the school party go off to the shop and a group of 40 people are left.

Now of that 40, a quarter go off to see the elephants. A quarter of the 40 go off to see the elephants. Work out how many that is and keep the number in your head.

Okay, one fifth of the 40 hurry off to look at the lions. One fifth disappear off to see the lions. Calculate how many one fifth of 40 is and add that to the number who went to visit the elephants and keep the new number in your memory.

Now all those who are left go off to see the monkeys. The rest of the 40 run off to have a look at the monkeys. What I want you to work out is how many of the 40 went to see the monkeys? How many went to see the monkeys? Work it out now.

I hope you've got your answer worked out in time, because Matrix is coming up to tell us how popular the monkeys were.

MATRIX: One quarter of 40 went to the elephant house which = 10. One fifth of the 40 went to the lion house. 40 ÷ 5 = 8. So, 10 + 8 = 18. 18 people went off to look at the elephants and the lions. The rest of the 40 visited the monkey house. So that's 40 - 18, which means that 22 people were big fans of monkeys!

RALPH: 22 people went to the monkey house. If that's the answer you got award yourself 5 points. Any other answer is definitely wrong and gets zero points. And that's the end of the round. Total your score so far, that's for both Round 1 and Round 2.
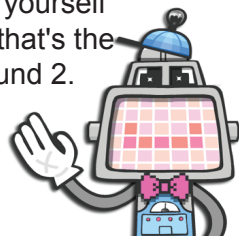
OK, if by any faint chance you managed to get full points so far the final round gives you the chance to earn another 20 points!

Round 3 - Jugging numbers!

Now for this round we first have to have three specially chosen numbers and your job, Maths Challengers, is to juggle these around using any of the four mathematical operations - addition, subtraction, multiplication or division - in an effort to make them come out to the target number. Now remember all the hard work has to be done in your head. So pick up your pencils and get ready to write down the numbers, which are:

MATRIX: 12, 6, and 3.

RALPH: 12, 6, and 3. And your target number is?

MATRIX: 54.

RALPH: 54! Right, you've got just one minute to juggle the numbers 12, 6 and 3 in an effort to make them come to the target number, 54.

                   And time's up. Matrix, tell us how it should be done.

MATRIX: 12 - 3 = 9; 9 x 6 = 54.

RALPH: And there we are. It's easy when Matrix does it. 10 points for all those who got the right answer then. If you think you've found another way of doing it get your teacher to look at it later on. And a chance of another 10 points coming up. Matrix, can we have three more number juggling numbers please?

MATRIX: 3, 4, and 8.

RALPH: Make a note: 3, 4, and 8. And the target number?

MATRIX: 36.

RALPH: Well then, you've got just one minute to try and find a way of making the target number 36 by juggling the numbers 3, 4 and 8.

                   Well was that one more difficult? I think it might have been. But I am sure Matrix can fill us in with the correct answer.

MATRIX: You're right, I can! It goes like this: 8 + 4 = 12; 12 x 3 = 36.

RALPH: Yes that's it! 10 points is what you get for getting it right - and remember if you found another way to reach that target number get your teacher to check it in a moment. That was your last chance to score because it's the end of the quiz. Add up all the points you got for whole contest. Now, say goodbye, Matrix.

MATRIX: Goodbye, Challengers! Keep those numbers juggling!