Number Day

Who wants to be a mathionaire?
We do!

Pupils will enjoy the challenge, the excitement and achievement of this game. Teachers can also play!

It will encourage pupils to:

- learn addition, subtraction, multiplication and division facts
- recognise multiples and fractions of familiar numbers
- find fractions and quantities
- understand and use the correct notation for money.

How to raise money:

Pupils are sponsored for every question they get right, or parents and carers can make a donation.

What you need:

- a set of question sheets for the pupils/contestants (there are 12 questions for each game)
- the answer sheet for the host
- chairs for the contestants to sit on
- the interactive PowerPoint presentation (optional).

How to play:

There are **12 questions**, each of which has four multiple choice answers. The questions increase in difficulty through the game.

There are different ways to play:

- pupils try all the questions and score points for the questions they get correct
- pupils start with the easiest questions – when they get a question wrong, that's the end of their turn. They score points at the last secure level (1,000 points, 5,000 points, 50,000 points etc).

You can play this game as a class:

- by asking a quick-fire question with the first pupil answering correctly becoming the contestant
- in teams, with each team answering all the questions, recording their answers and checking them at the end of the game
- individually, with each pupil answering all the questions, recording their answers and checking them at the end of the game
- in groups of about four, where one pupil acts as the question master, one as the contestant and the others as the audience/friend. Members of the group swap around so that every pupil has the chance to be the contestant. Then all the answers are marked and the highest number of points scored is taken as the score for all the members of the group
- groups of pupils can write their own lists of questions.

The following are suggested questions that could be used for the key stages indicated. The underlined answer is correct. The questions are arranged in order of difficulty. Add to them and replace questions as appropriate for your class.

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Question sheet

Number Day

1 (500 points)
Which of these numbers is the greatest?
3.501, 3.499, 3.5 or 3.51?
a) 3.501   c) 3.5
b) 3.499   d) 3.51

2 (1,000 points)
Each of the angles of a regular quadrilateral is:
a) 45°   c) 90°
b) 60°   d) 180°

3 (2,000 points)
What is the volume of a regular rectangular prism with sides 3 x 6 x 5 cm?
a) 90cm³   c) 35cm³
b) 180cm³   d) 75cm³

4 (5,000 points)
A pay-as-you-go mobile phone has a call rate of 60p a minute for the first minute, and then costs 12p a minute after that. How long could you call for a cost of £2.40?
a) 18 mins   c) 20 mins
b) 16 mins   d) 15 mins

5 (10,000 points)
A six-sided dice is thrown 300 times. How many times would you expect to roll a six?
a) 6   c) 1800
b) 50   d) 294

6 (20,000 points)
When a shape is enlarged by scale factor two, what is the increase in its area?
a) twice the area   c) four times the area
b) half the area   d) eight times the area

7 (50,000 points)
Find the ratio of the number of vowels to the number of consonants in the word SPHERICAL. Give your answer in its simplest form.
a) 1:2   c) 2:1
b) 3:6   d) 9:3

8 (75,000 points)
Which point lies on the line y = 2x - 1?
a) (0,0)   c) (1,2)
b) (1,1)   d) (2,1)

9 (150,000 points)
Which formula for the nth term describes the following number sequence, the first four terms of which are: 3, 7, 11, 15…?
a) 3n + 4   c) 4n − 1
b) 4n + 3   d) 3n + 1

10 (250,000 points)
At what speed am I moving, if I cover 24 miles in 45 minutes?
a) 24 mph   c) 32 mph
b) 28 mph   d) 36 mph

11 (500,000 points)
If the price of a £200 TV is reduced by 15% for the sale, then increased by 15%, what is its final price?
a) £200   c) £175.50
b) £195.50   d) £215.00

12 (1,000,000 points)
Lydia downloads 3 games and 4 music videos for £15. Sian downloads 4 games and 2 music videos for £15. What is the download price of 1 game and 1 music video?
a) game £15, video £15   c) game £4, video £1
b) game £2, video £3.50   d) game £3, video £1.50

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Number Day

Answer sheet

1 (500 points)
Which of these numbers is the greatest?
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b) 180cm^3
c) 35cm^3
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d) 3n + 1

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<u>d) game £3, video £1.50</u>

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