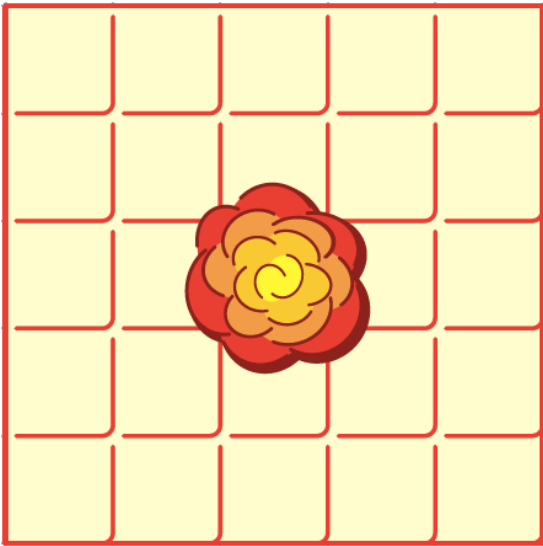




Mathematics Challenge

Issue 137

Dear students and parents, welcome to the Dulwich Mathematics Challenge. Test your brainpower, whatever your mathematical ability. If you would like to contribute a puzzle please email me at chris.stanley@dulwich-beijing.cn



This cake is to be divided into five pieces of the same volume for five hungry children. However, they all want an equal amount of the sweet in the middle. How can this be done?

Last week:	
1.	B
2.	D
3.	A
4.	185
5.	No
6.	B

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Junior Mathematical Challenge

1. A crossnumber is like a crossword except that the answers are numbers with one digit in each square. What is the sum of all the digits in the solution to this crossnumber?

- A 15 B 17 C 23 D 26 E can't be sure

2. I start counting at 19 and go on to 89, taking one second to say each number. How long do I take altogether?

- A 1 min 10s B 1 min 29s C 1 min 11s D 1 min 19s E 1 min exactly

3. A car with five tyres (four road tyres and a spare) travelled 30000km. All five tyres were used equally. How many kilometres' wear did each tyre receive?

- A 6000 B 7500 C 24000 D 30000 E 150000
JMC 1989

CLUES

Across (A)

1. See 3D
3. Cube
4. 5 times 3D
Down (D)
2. Square
3. 4 times 1A

	1	2
3		
4		

Junior Mathematical Olympiad

4. The Earth has radius 6500km, and rotates on its axis once every 24 hours. If I stand with one foot either side of the Equator, at what approximate speed (in km/h) would the Earth be wizzing around me?

5. ABCDEFGH is a regular octagon. How big is angle ADG?

JMO 1992

Intermediate Olympiad

6. A regular 13-sided polygon is inscribed in a circle with centre O. Triangles can be formed by choosing three vertices of this polygon to be the vertices of a triangle. For how many of the triangles formed in this way is the point O inside the triangle?

- A 39 B 72 C 78 D 91 E 260

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