Puzzle: September 2025

Some of you attended the meeting in May to show an interest in writing questions. Thank you for this. You must not be downhearted if some of your questions are not chosen by UKMT the first time. I have had none of my last 20 questions been accepted for the SMC! I either cry and give up or keep trying. The time before I had questions 1 and 23 selected. Come on!

Warning: I found these questions hard to make up! Very hard!!

(a) The integers 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 each occur exactly once.

Find the cubes that are less than 1,000,000.

For example: *squares* less than 10,000. 324 576 9801

(a) The integers 1, 2, 3, 4, 5, 6, 7, 8 and 9 each occur exactly once.

Find the cubes that are less than 1,000,000.

For example: *squares* less than 1,000. 1 9 25 36 784

The question above is my 37th puzzle for the UKMT. It is also the hardest!

You are allowed the use of a calculator.

The names of those sending answers to volunteering@ukmy.org.uk by 30th Septamber will appear in the next UKMT News.

Puzzle: June 2025

Answer: 11 801

$3483 = 9 \times 387$	$3484 = 4 \times 871$	$3485 = 5 \times 697$	$3486 = 14 \times 249$
$3487 = 11 \times 317$	$3488 = 16 \times 218$	$3489 = 3 \times 1163$	$3490 = 10 \times 349$
$3491 = 1 \times 3491$	$3492 = 12 \times 291$	$3493 = 7 \times 499$	$3494 = 2 \times 1747$
$3495 = 15 \times 233$	$3496 = 8 \times 437$	$3497 = 13 \times 269$	$3498 = 6 \times 583$

Answers from:

Bella T	Connie B	Jarred J	Luke J	Tyler J	Patricia K
Tejay M	Joseph P	Alan S	Jak T	Niall W	Rohan W

Thank you to Wordsley School Maths Club in Dudley for their answer.