The Scottish Mathematical Council

www.scot-maths.co.uk

MATHEMATICAL CHALLENGE 2019−2020

Entries must be the unaided efforts of individual pupils.
Solutions must include explanations and answers without explanation will be given no credit.
Do not feel that you must hand in answers to all the questions.

CURRENT AND RECENT SPONSORS OF MATHEMATICAL CHALLENGE ARE
The Edinburgh Mathematical Society, The Maxwell Foundation, Professor L E Fraenkel, The London Mathematical Society and The Scottish International Education Trust.
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Primary Division: Problems II

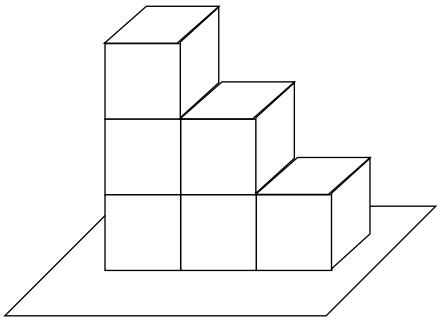
P2.1. In a recent by-election the original numbers were lost but the live news broadcast at the time reported:

> "Jones and Brown together polled 65% of the total number of votes; Jones and Robinson together accounted for 15355 votes and Brown polled 8245."

There were no other candidates.
Which of the three candidates had the most votes? **Explain why.**

P2.2. Eighteen years ago Ivan was three times as old as his son but he is only twice as old now. How old is Ivan?

P2.3. Six dice are placed on a table as shown.



Each die is of the standard type with 1 opposite 6, 2 opposite 5 and 3 opposite 4.

What is the minimum sum of all the 21 visible faces of the dice in the stack?
(The *invisible* faces are those between the dice and the faces on the table.)

END OF PROBLEM SET II