



17 October 2022

Dear Parent/Carer

Weekly Maths Challenge

I would like to take this opportunity to congratulate all the students who completed the Maths Challenge successfully. For those of you who submitted an incorrect answer, well done for attempting it, please see below the answer.

The winner from this week is Chiara Cope (Year 7), please come and see me to receive your maths prize.

Adding up the areas of the faces

The area of each face of each cube is found by squaring the side length.

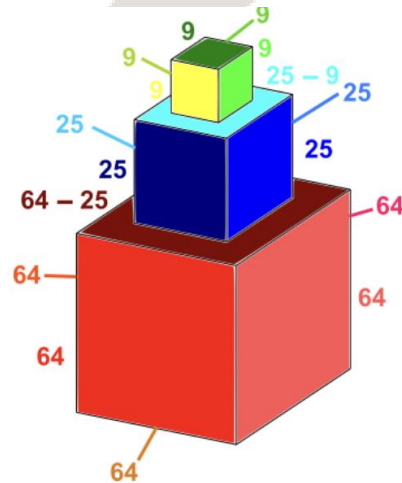
The areas of the faces of the shape, in square centimetres, are shown on the diagram to the right.

Remember that we can't see all of the faces!

The total area is:

$$\begin{aligned} &64 + 64 + 64 + 64 + 64 + (64 - 25) + 25 \\ &+ 25 + 25 + 25 + (25 - 9) + 9 + 9 + 9 + 9 + 9 \\ &= 64 \times 5 + 39 + 25 \times 4 + 16 + 9 \times 5 \\ &= 640 \div 2 + 39 + 100 + 16 + 45 \\ &= 320 + 139 + 61 \\ &= 520 \end{aligned}$$

So the total surface area is 520 cm^2 .



This week's challenge hopefully will require a little more time, the deadline for entries is the end of day on Friday 21 October. Please email the answer and any workings to: amerrick@buckinghamschool.org

All answers submitted are rewarded with a house point, and correct answers given go into a raffle draw to win a maths related prize.

There are also additional Maths Challenges in the Maths Sticker Clubs, this is differentiated for each year group. Please speak to Mrs Saunders should this interest you.

May I take this opportunity to wish everyone a restful half term, and hope you come back refreshed, ready to be challenged more in your Maths lessons.

W/c 17 October 2022 – Maths Challenge

A square has 2 diagonals, a regular pentagon has 5, and a regular hexagon has 9.

How many diagonals does a regular icosagon (20 sides) have?

Good Luck!

Yours faithfully,

Mr A Merrick

Curriculum Leader of Maths