

# M3 = 38 days to go!

7 Holly did three exams.

Her results were:

Geography	28 out of 40	$\frac{28}{40} = 70\%$	$= 0.70$
Music	16 out of 25	$\frac{16}{25} = 64\%$	$= 0.64$
English	34 out of 50	$\frac{34}{50} = 68\%$	$= 0.68$

Her Mum says "English was your best subject."

Is her Mum right?

You must show your working and explain your answer.

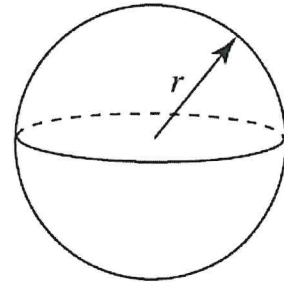
Answer No because Geography was her best

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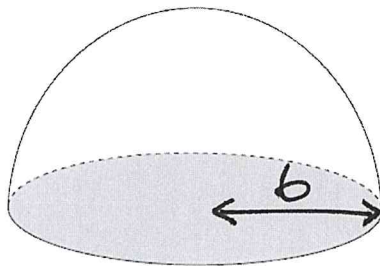
[3]

$$\text{Volume of sphere} = \frac{4}{3}\pi r^3$$

$$\text{Surface area of sphere} = 4\pi r^2$$



20 The **solid** hemisphere has a diameter of 12 cm.



Mary says the total surface area is  $226 \text{ cm}^2$  to the nearest  $\text{cm}^2$

Martha says the total surface area is  $339 \text{ cm}^2$  to the nearest  $\text{cm}^2$

Explain with reasoning who is correct.

$$\begin{aligned} \text{Sphere Surface Area} &= 4\pi r^2 \\ &= 4 \times \pi \times 6^2 \\ &= 144\pi = 452 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{semi or hemisphere. curved surface} &= 72\pi \\ &= 226 \text{ cm}^2 \end{aligned}$$

$$\underline{\text{Base.}} \quad A = \pi r^2 \text{ just a circle}$$

$$A = \pi \times 6^2$$

$$A = 36\pi$$

$$A = 113$$

Answer Martha is correct [4]

$$\begin{aligned} \text{Total} &= 226 + 113 \\ &= 339 \text{ cm}^2 \end{aligned}$$