# MME

### GCSE MATHEMATICS AQA | Edexcel | OCR | WJEC

## Volume of 3D Shapes

Please write clearly in block capitals

Forename:

Surname:

#### Materials

For this paper you must have:

mathematical instruments

You *can* use a calculator.



#### Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- · Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

#### Information

- · The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

#### Advice

· In all calculations, show clearly how you work out your answer.









Turn over ►

VOIIIME	e of a sphere: $V = \frac{4}{\pi}$	$\tau r^3$		
VOIUTIE	$\frac{1}{3}$			
			Not drawn accurately	
	/			
	[	4 cm		
	N			
	$\backslash$			
Calcula	ate the volume of the	sphere above.		
Give yo	our answer in terms o	of $\pi$		[2 m
				[2 111
	Apower			
	Answer		CIN <sup>o</sup>	
		Turn over for next question		





Th	ne diagram below shows a square based pyramid ABCDE.	
Th	be vertical beight of the pyramid is $3h$	
w	ater fills the square based pyramid to a height of $h_{i}$	
Th	he top of the water can be seen along line WXYZ.	
AE	B = x	
W.	$XX = \frac{2}{3}x$	
	3h	drawn urately
	$h = \begin{bmatrix} y \\ x \end{bmatrix}$	> <sub>C</sub>
	D	
Ca	alculate the proportion of the pyramid that is filled with water.	
Gi	ive your answer as a fraction in its simplest form.	
		[4 marks]
		_
		_
	Answer	
	End of Questions	