

29th June

Foundation Plus 5-a-day

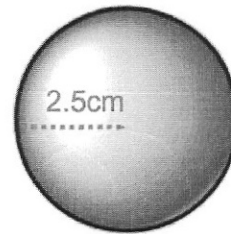


Corbettmaths

A sphere has a radius of 2.5cm  
Work out the volume of the sphere.  
Give your answer to 1 decimal place.

$$V = \frac{4}{3} \pi \times 2.5^3$$

$$= 65.45 \text{ cm}^3 \text{ to 2dp}$$



220g of lead and 105g of tin are mixed to make an alloy.

The density of lead is  $11 \text{ g/cm}^3$   
The density of tin is  $7 \text{ g/cm}^3$

Work out the volume of lead used in the alloy.

$$220 \div 11 = 20 \text{ cm}^3$$

Work out the volume of tin used in the alloy.

$$105 \div 7 = 15 \text{ cm}^3$$

What is the density of the alloy?

$$\frac{325}{35} = 9.286 \text{ g/cm}^3$$

to 3dp

Jenny invests £400 for two years at 5% compound interest, paid yearly.  
Tim says that the interest Jenny will receive will be £40.

Is Tim right?  
Explain your answer.

1st year = £420  
2nd year = £441  
No it would be £41

$$a = \begin{pmatrix} 0 \\ -4 \end{pmatrix} \quad b = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$

Work out  $5a + 3b$

$$5a = \begin{pmatrix} 0 \\ -20 \end{pmatrix} \quad 3b = \begin{pmatrix} 3 \\ 6 \end{pmatrix}$$

$$\begin{pmatrix} 3 \\ -14 \end{pmatrix}$$