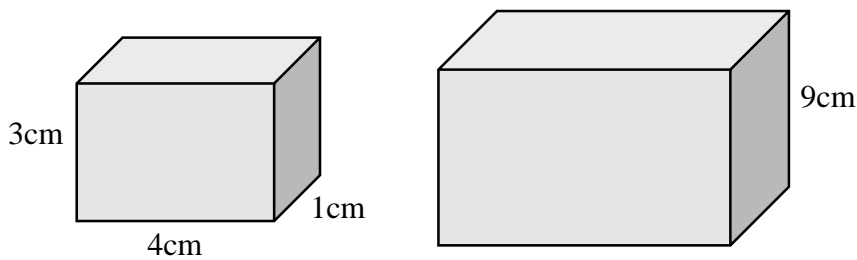




ALBA MATHEMATICS
National 5 Course Revision
Task Sheet 4



1. Show that $\frac{\sin^2 x}{\cos x \cdot \tan x} = \sin x$
2. Find the resultant vector of $3\mathbf{u} - 2\mathbf{v}$ when $\mathbf{u} = \begin{pmatrix} 1 \\ -3 \\ 2 \end{pmatrix}$ and $\mathbf{v} = \begin{pmatrix} -2 \\ 0 \\ 3 \end{pmatrix}$.
3. Find the equation of the straight line with gradient 4 and passing through $(-4, 1)$.
4. Evaluate $64^{5/6}$.
5. Expand and simplify $(x - 4)^3$.
6. Solve $\frac{3x+5}{4} = \frac{x}{3}$.
7. Two cuboids below are mathematically similar. Work out the volume of the larger cuboid.



8. Write $x^2 + 6x - 11$ in the form $(x + a)^2 + b$.
9. Simplify $\sqrt{32} - \sqrt{18} + (\sqrt{2})^3$
10. Write down the equation of the graph shown below.

