| (a) | (b) | (c) | (d) |
| :---: | :---: | :---: | :---: |
| A cuboid has dimensions 4 cm by 9 cm by 12 cm . Find the length of the diagonal $A B$ to 1 decimal place. <br> 15.5 cm | Find the value of angle $x$. Give reasons for your answers. <br> $29^{\circ}$ | Calculate the value of angle $x$. giving your answer to 1 decimal place. <br> $43.9^{\circ}$ | The two cylinders $A$ and $B$ are similar. The surface areas of $A$ and $B$ are $24 \mathrm{~cm}^{2}$ and $73.5 \mathrm{~cm}^{2}$ respectively. Given the volume of cylinder $B$ is $171.5 \mathrm{~cm}^{3}$, find the volume of cylinder A. $32 \mathrm{~cm}^{3}$ |
| (e) | (f) | (g) | (h) |
| Find the area of the triangle shown, giving your answer to 3 significant figures. | Find the angle that the line $A G$ makes with the plane $E F G H$. Give your answer to 1 decimal place. | $A B$ and $C D$ are chords of the circle. Find the missing value $x$. <br> 3.75 cm | $\overrightarrow{O A}=\boldsymbol{a} \quad \overrightarrow{O B}=\boldsymbol{b}$ <br> $\overrightarrow{O B}=\overrightarrow{B E} . \mathrm{C}$ is the midpoint of OA. Given that CDE is a straight line, find $B D: D A$ <br> $1: 2$ |

