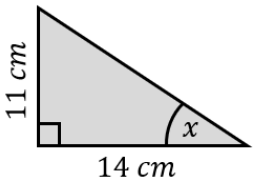
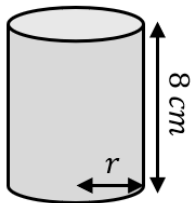


# Crack the Code

# Calculating with Bounds

<b>A</b>	The length and width of a rectangle are measured to the nearest metre as $6\text{ m}$ and $5\text{ m}$ . Find the lower bound of the area of the rectangle.	<b>B</b>	A coin is weighed as $30\text{ g}$ to the nearest $5\text{ g}$ . Find the upper bound of the weight of 10 coins.
<b>C</b>	The three sides of a triangle are $5\text{ cm}$ , $8\text{ cm}$ and $11\text{ cm}$ , all measured to the nearest cm. Find the upper bound of the perimeter of the triangle.	<b>D</b>	A dog weighs $26\text{ kg}$ to the nearest $\text{kg}$ . Its puppy weighs $6.5\text{ kg}$ to the nearest $0.5\text{ kg}$ . Find the lower bound of the difference between their weights.
<b>E</b>	A car travels $82\text{ km}$ correct to the nearest $\text{km}$ , in 1.5 hours correct to the nearest 0.1 hour. Find the lower bound of the speed in $\text{km/h}$ .	<b>F</b>	The area of a square is measured as $60\text{ cm}^2$ , correct to 1 significant figure. Find the upper bound of the length of the side of the square.
<b>G</b>	The formula $A = \frac{1}{2}ab \sin C$ is used to find the area of a triangle. $a = 12\text{ cm}$ , $b = 9\text{ cm}$ and angle $C$ is $72^\circ$ , all correct to 2 significant figures. Find the upper bound of the area $A$ .	<b>H</b>	The density of a wooden block is measured as $1.8\text{ g/cm}^3$ to the nearest $0.1\text{ g/cm}^3$ and its volume as $40\text{ cm}^3$ to the nearest $5\text{ cm}^3$ . Find the lower bound of the mass of the wooden block in $\text{g}$ .
<b>I</b>	The lengths of the right-angled triangle shown are measured correct to 2 significant figures. Find the lower bound of the size of angle $x$ . 	<b>J</b>	The cylinder shown has a volume of $400\text{ cm}^3$ , correct to the nearest $10\text{ cm}^3$ . Its height is $8\text{ cm}$ correct to 1 significant figure. Find the upper bound of the radius of the cylinder. 

To get the three-digit code, add all your answers together and round to the nearest integer.