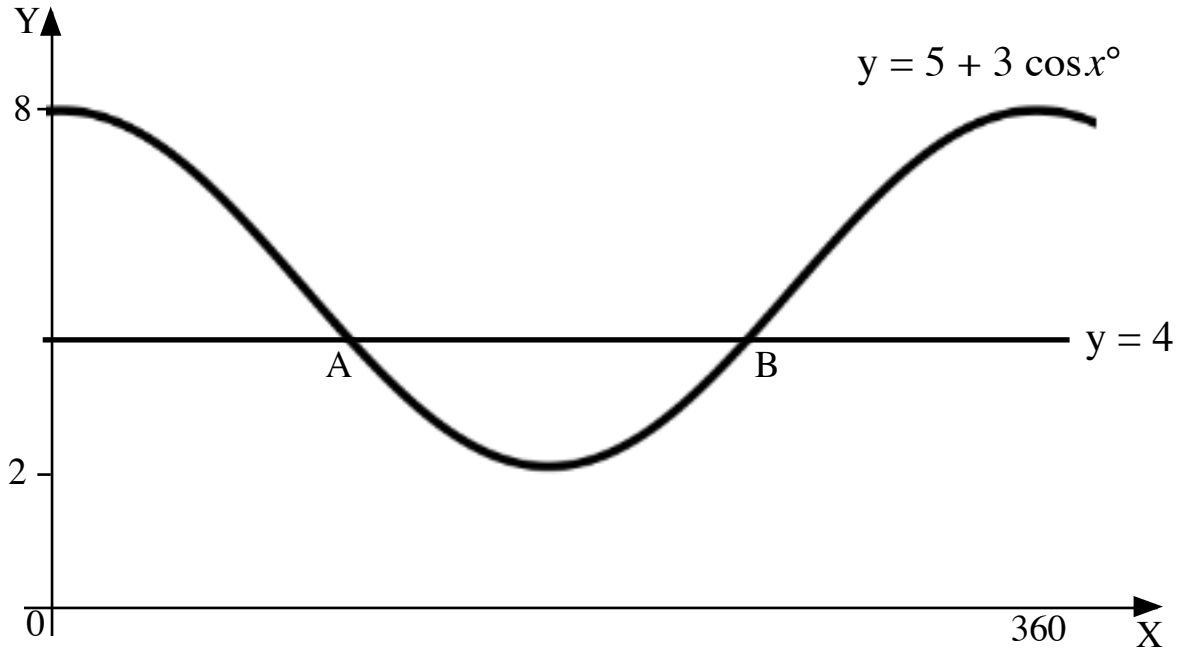
EQUATIONS

The graphs with equations $y = 5 + 3\cos x°$ and $y = 4$ are shown.
Find the x coordinates of the points of intersection A and B.



$$5 + 3\cos x° = 4$$
$$3\cos x° = -1$$
$$\cos x° = -\frac{1}{3}$$

$$x = 109 \cdot 5 \text{ or } 250 \cdot 5$$

* **A**, **S**, **T**, **C** is where functions are **positive**:

S	A
cosine negative ✓	*cosine positive* ×
180 - a = 109·5	a = $\cos^{-1} 1/3$ = 70·528...
180 + a = 250·5	360 - a = 289·5
cosine negative ✓	*cosine positive* ×
T	C

* A all functions are positive
S sine function only is positive
T tangent function only is positive
C cosine function only is positive