$28 \quad A, B$ and $C$ are points on the circle $x^{2}+y^{2}=36$ as shown. $A$ is on the $y$-axis.
$B$ is on the $x$-axis.

$M$ is the midpoint of $A B$.
COM is a straight line.


28 (a) Show that the coordinates of $A$ are $(0,6)$
$\qquad$
$\qquad$

28 (b) Work out the coordinates of $B$.
$\qquad$
$\qquad$

Answer ( $\qquad$ , $\qquad$ )

28 (c) Show that the equation of the straight line passing through $C, O$ and $M$ is $y=x$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

28 (d) Work out the coordinates of $C$. Give your answers in surd form.
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Answer ( $\qquad$ , $\qquad$ )

## Turn over for the next question

