$25 \quad P(4,8)$ is a point on a circle, centre $O$.
The tangent at $P$ intersects the axes at points $A$ and $B$.


25 (a) Show that the gradient of the tangent is $-\frac{1}{2}$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

25 (b) Work out the length $A B$.
Give your answer in the form $a \sqrt{5}$ where $a$ is an integer.
You must show your working.
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$\qquad$

Answer $\qquad$ units

## Turn over for the next question

