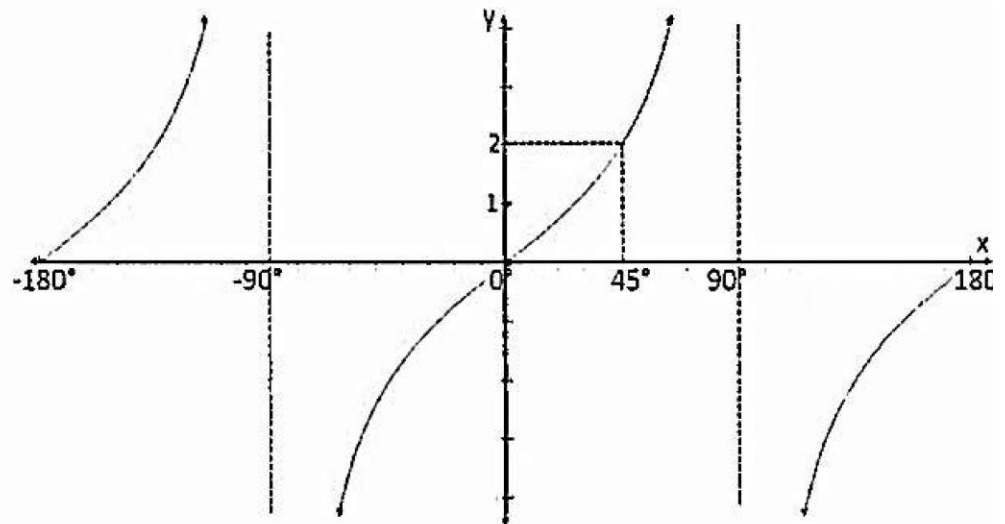## QUESTION 5

5.1 The sketch alongside
shows the graph of
$y = a \tan x$
for $-180° \le x \le 180°$.

5.1.1 What is the value of a ? (1)

5.1.2 What is the name given to the dotted lines at 90° and -90°? (1)

5.1.3 What is the period of the tan graph? (1)

5.2 Draw the following graph and answer the related questions:

5.2.1 On your own set of axes draw the graph of $g(x) = y = \sin x + 1$, for $0° \le x \le 360°$.
Remember to show all intercepts with the axes, turning points and end points. (3)

5.2.2 What is the period of the sin graph? (1)

5.2.3 What is the amplitude of the sin graph? (1)

5.2.4 What is the range of the sin graph? (2)

5.2.5 Give, from your graph, a value of x for which $g(x) = y = \sin x + 1 = 0$. (1)

5.2.6 If the graph of g is shifted to become $h(x) = y = \sin x - 2$, what would the
maximum value of graph h be? (1)

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