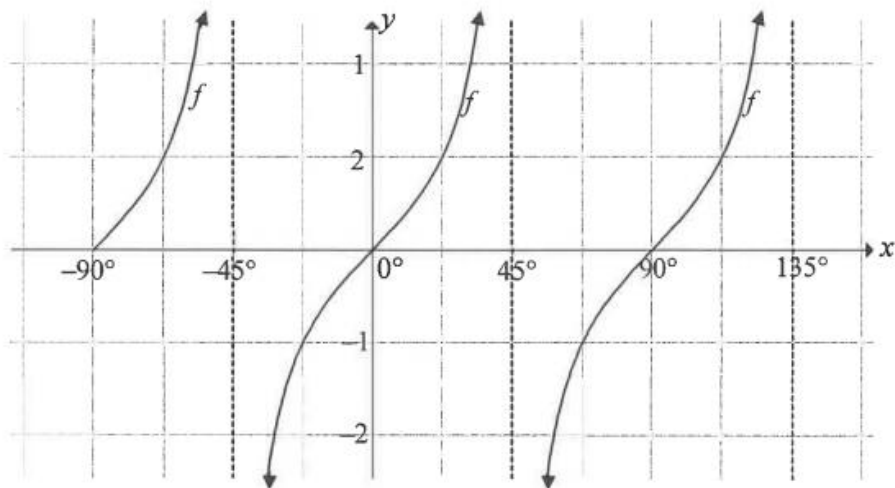


Trigonometric Functions (Examined in Paper 2)

Exercise A

QUESTION 6

6.1 In the diagram, the graph of $f(x) = \tan bx$ is drawn for the interval $-90^\circ \leq x \leq 135^\circ$.



6.1.1 Determine the value of b .

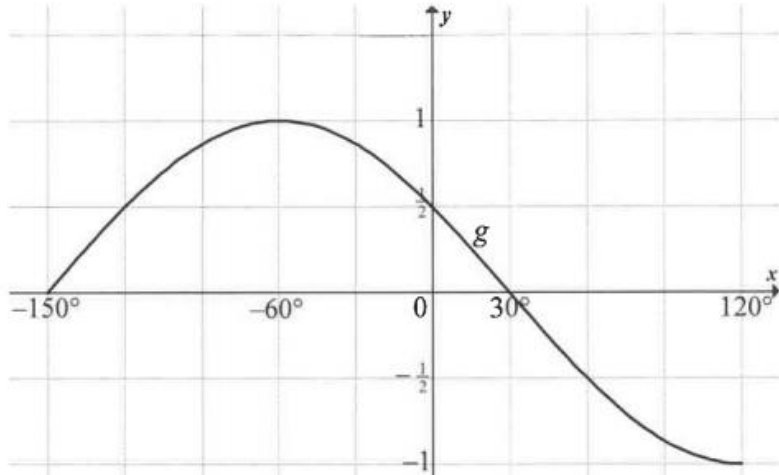
6.1.2 Determine the values of x in the interval $0^\circ \leq x \leq 135^\circ$ for which $f(x) \leq -1$.

6.1.3 Graph h is defined as $h(x) = \tan b(x + 55^\circ)$. Write down the equations of the asymptotes of h in the interval $-90^\circ \leq x \leq 135^\circ$.

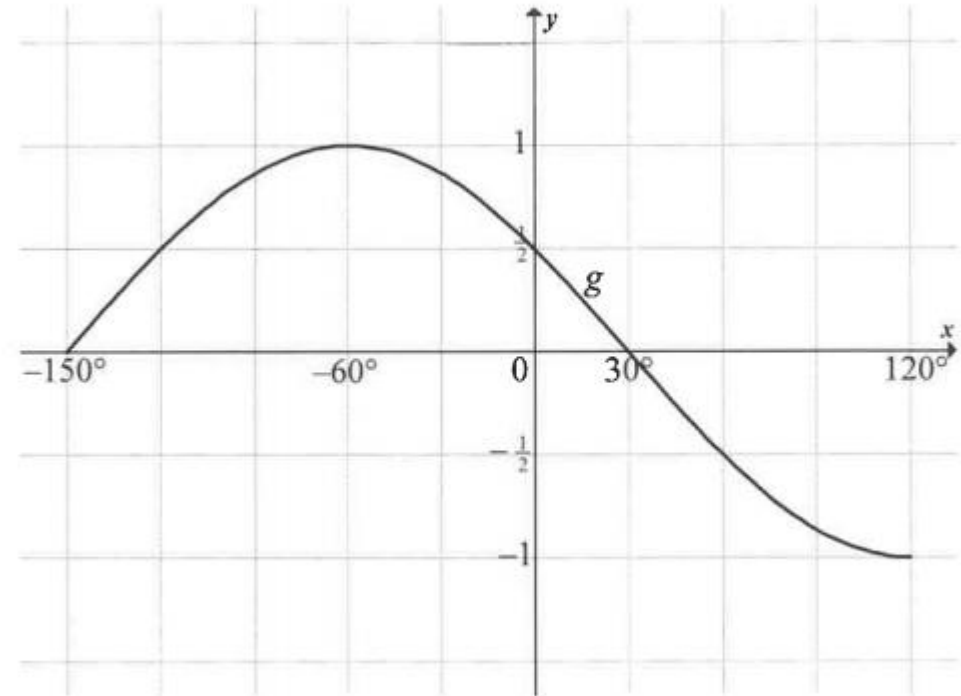
Trigonometric Functions (Examined in Paper 2)

Exercise B

- 6.2 In the diagram, the graph of $g(x) = \cos(x + 60^\circ)$ is drawn for the interval $-150^\circ \leq x \leq 120^\circ$.



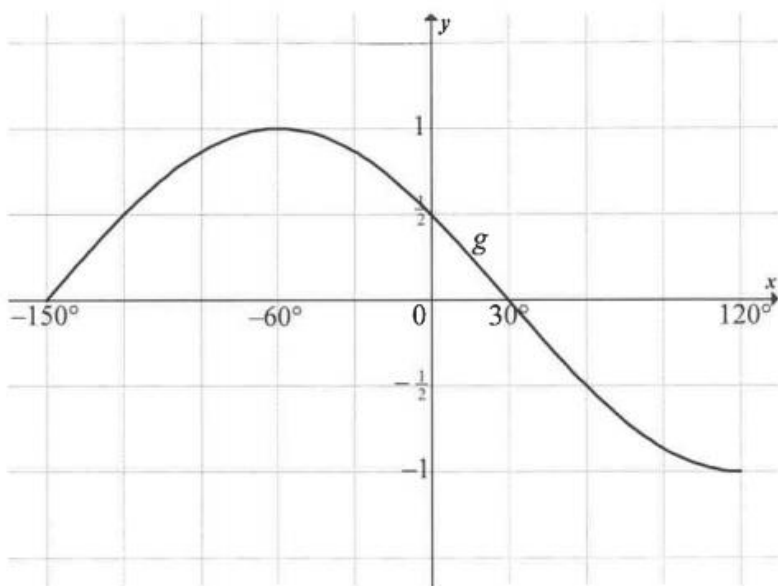
- 6.2.1 On the same system of axes, draw the graph of $k(x) = -\sin x$ for the interval $-150^\circ \leq x \leq 120^\circ$. Show ALL the intercepts with the axes as well as the coordinates of the turning points and end points of the graph.



Trigonometric Functions (Examined in Paper 2)

Exercise B cont.

- 6.2 In the diagram, the graph of $g(x) = \cos(x + 60^\circ)$ is drawn for the interval $-150^\circ \leq x \leq 120^\circ$.



- 6.2.2 Determine the minimum value of $h(x) = \cos(x + 60^\circ) - 3$.
- 6.2.3 Solve the equation $\cos(x + 60^\circ) + \sin x = 0$ for the interval $-150^\circ \leq x \leq 120^\circ$.
- 6.2.4 Determine the values of x for the interval $-150^\circ \leq x \leq 120^\circ$, for which $\cos(x + 60^\circ) + \sin x > 0$.

END

$$e^{i\pi} + 1 = 0$$

Euler's Identity

SOURCES

- 1. FET CAPS DOCUMENT**
- 2. GRADE 11 EXAMINATION GUIDELINES**
- 3. GRADE 11DBE/NOVEMBER 2015 -2018**