Exercise 1 Calc. : ✗

Convert:	
1. $\frac{\pi}{12}$ rad into degrees	1 mark
2. 24ř into radians	1 mark

Exercise 2 Calc. : ✗

Solve in $\mathbb{R}$:	
1. $\sin(x) = -\frac{\sqrt{3}}{2}$	1 mark
2. $\tan\left(2x - \frac{\pi}{5}\right) = -1$	3 marks
3. $\cos^2(x) - \cos(x) - 2 = 0$	3 marks

Exercise 3 Calc. : ✗

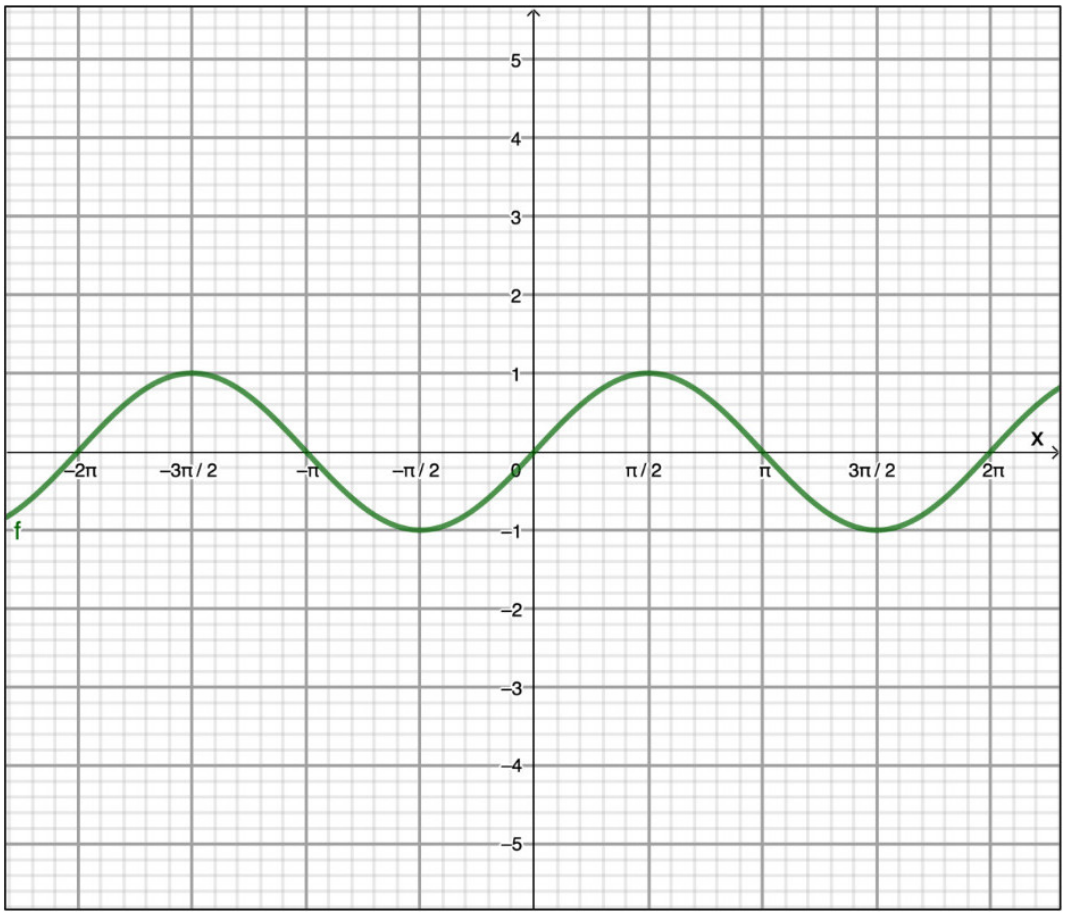
Answer the following questions.	
1. Determine $\cos\left(\frac{11}{3}\pi\right)$	1 mark
2. Use addition formulas to determine $\sin(30ř + 45ř)$.	2 marks

Exercise 4 Calc. : ✗

Given $\alpha \in \left[\frac{\pi}{2}, \pi\right]$ and $\sin(\alpha) = \frac{1}{5}$, determine $\cos\left(\alpha - \frac{\pi}{6}\right)$.	4 marks

Exercise 5 Calc. : ✗

Given the function $f(x) = \sin(x)$.



1. Determine amplitude, period and midline of the function — 1.5 marks

$$g(x) = 2 \cdot \sin\left(\frac{5}{2}x\right) - 1$$

2. On the diagram above, draw the graph of g. — 2.5 marks

Exercise 6 Calc. : ✗

The Smiths have 8 kids. Each one of the kids receives their allowances each month.
The mean value of the allowances is 54 per month The standard deviation is 13.3 per month.

1. This month, the eldest has received 75. Determine the mean allowance of the other 7 children. — 2 marks

The parents offer the kids to increase their allowances. They offer two options.
Option 1: increase the allowances by 5.
Option 2: increase the allowances by 5% thus multiplying by 1.05.

1. What are the mean value and the standard deviation with the first option? — 1.5 marks
2. What are the mean value and the standard deviation with the second option? — 1.5 marks