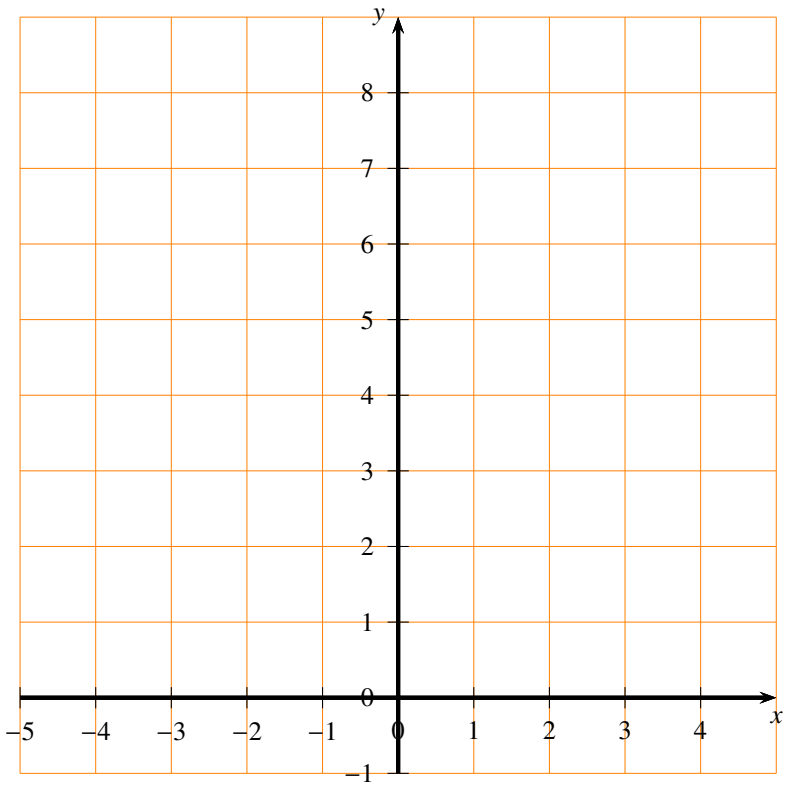
Exercise 1 Calc. : ✗

Let f be the function defined by $f(x) = 2^x$

1. **Complete** the table of values below: 2 marks

x	-3	-2	-1	0	1	2	3
$f(x)$							

2. **Sketch** a graph of the function f below: 2 marks



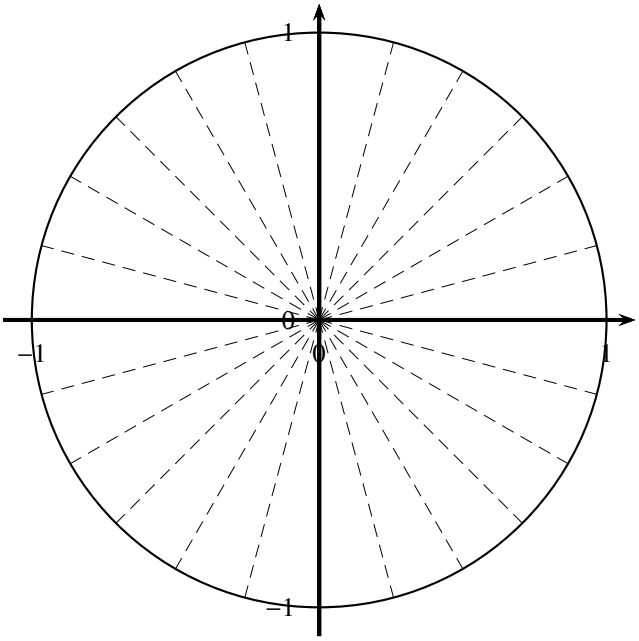
3. **Discuss** if the function f is representing exponential growth or decay. **Justify**. 1 mark

Exercise 2 Calc. : ✗

1. **Match** each angle in degrees (from a to e) to the corresponding angle in radians (from i to v): — 2.5 marks

a) 90ř	b) 30ř	c) 300ř	d) 270ř	e) 135ř
i) $\frac{5}{3}\pi$	ii) $\frac{1}{2}\pi$	iii) $\frac{3}{4}\pi$	iv) $\frac{1}{6}\pi$	v) $\frac{3}{2}\pi$

2. **Place** these five angles on the Unit Circle below. — 2.5 marks



Exercise 3 Calc. : ✗

We have put together the December B tests in mathematics, for S5 pupils of EEB1. Among those tests, we look at the grades of 6 students. Their 6 grades were as follows:

5, 5, 6, 6, 6, 8

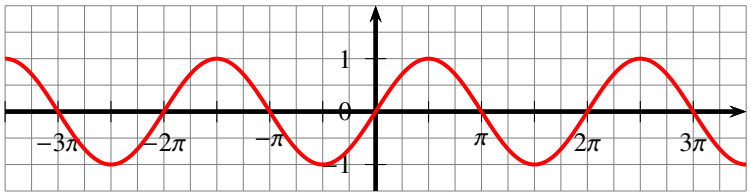
1. **Calculate** the mean of these 6 grades. — 1 mark
2. **Check** that the standard deviation of these 6 grades is 1. — 2 marks
3. In another group of students, the mean is the same but the standard deviation is higher. **Interpret** this difference in terms of results of the two groups of students. — 1 mark
4. **Give** an example of a series of 6 grades with the same mean, but with a higher standard deviation. — 1 mark

Exercise 4 Calc. : ✗

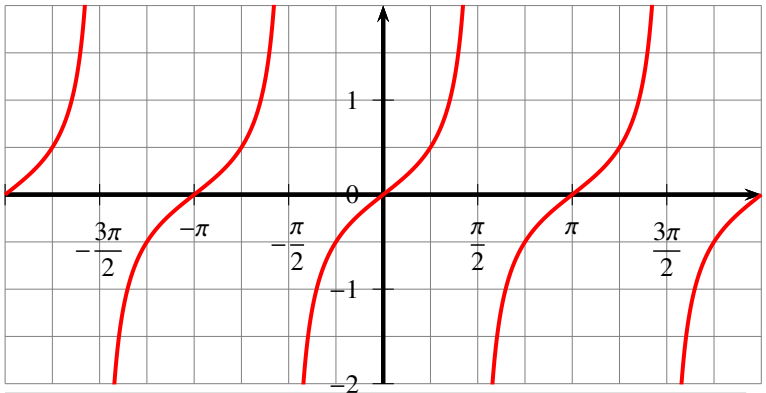
1. **Associate** each function (from f to h) to the graph (from i to iii): 3 marks

$f(x) = \sin(x)$ $g(x) = \cos(x)$ $h(x) = \tan(x)$

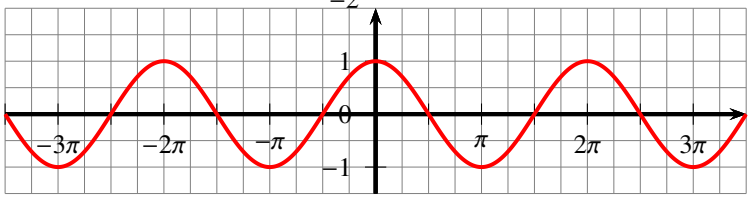
i)



ii)



iii)



2. **Give** the période of the functions i) and ii). 2 marks