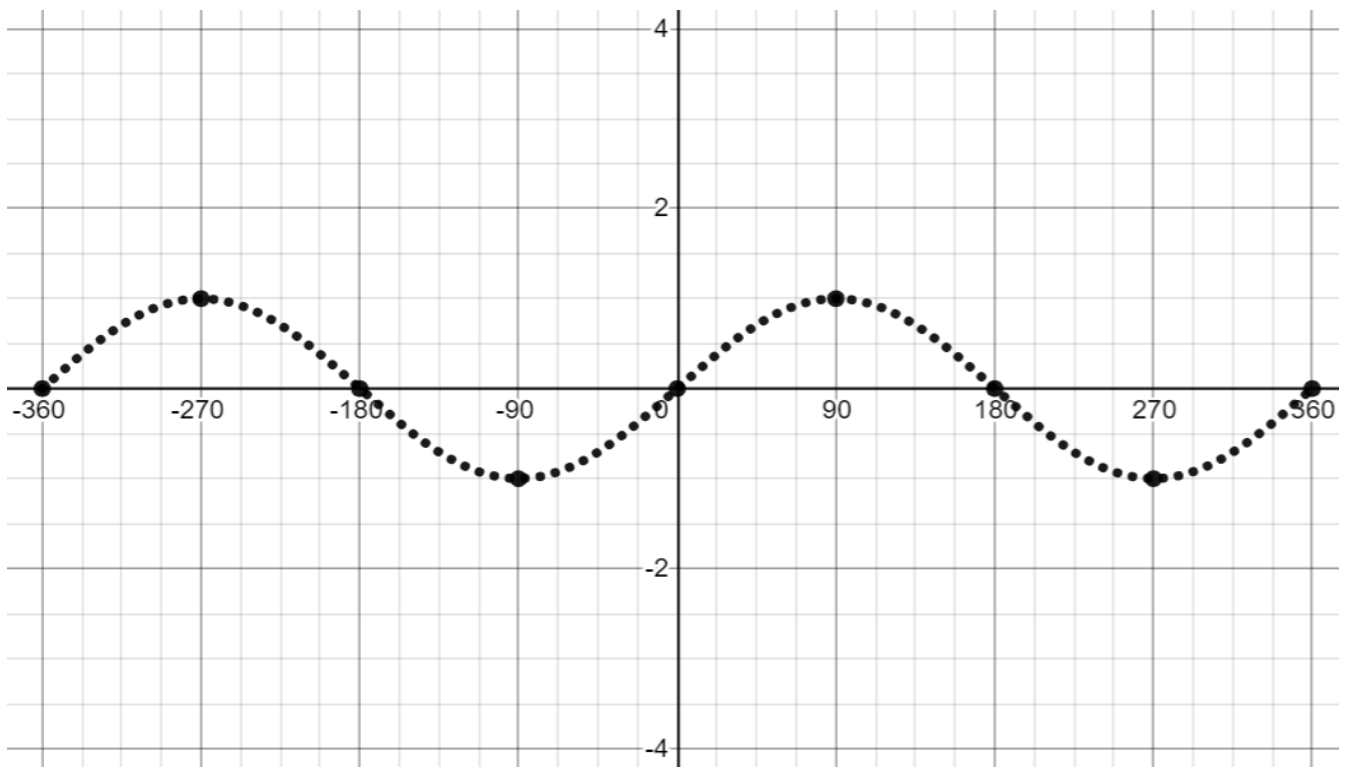


5.30 Trigonometric Transformations

1. Complete the following table of values and graph each function in a different colour.

$y = \sin(x) + 3$	$y = \sin(x) - 2$
-------------------	-------------------

x	y	x	y
-360°		-360°	
-270°		-270°	
-180°		-180°	
-90°		-90°	
0°		0°	
90°		90°	
180°		180°	
270°		270°	
360°		360°	

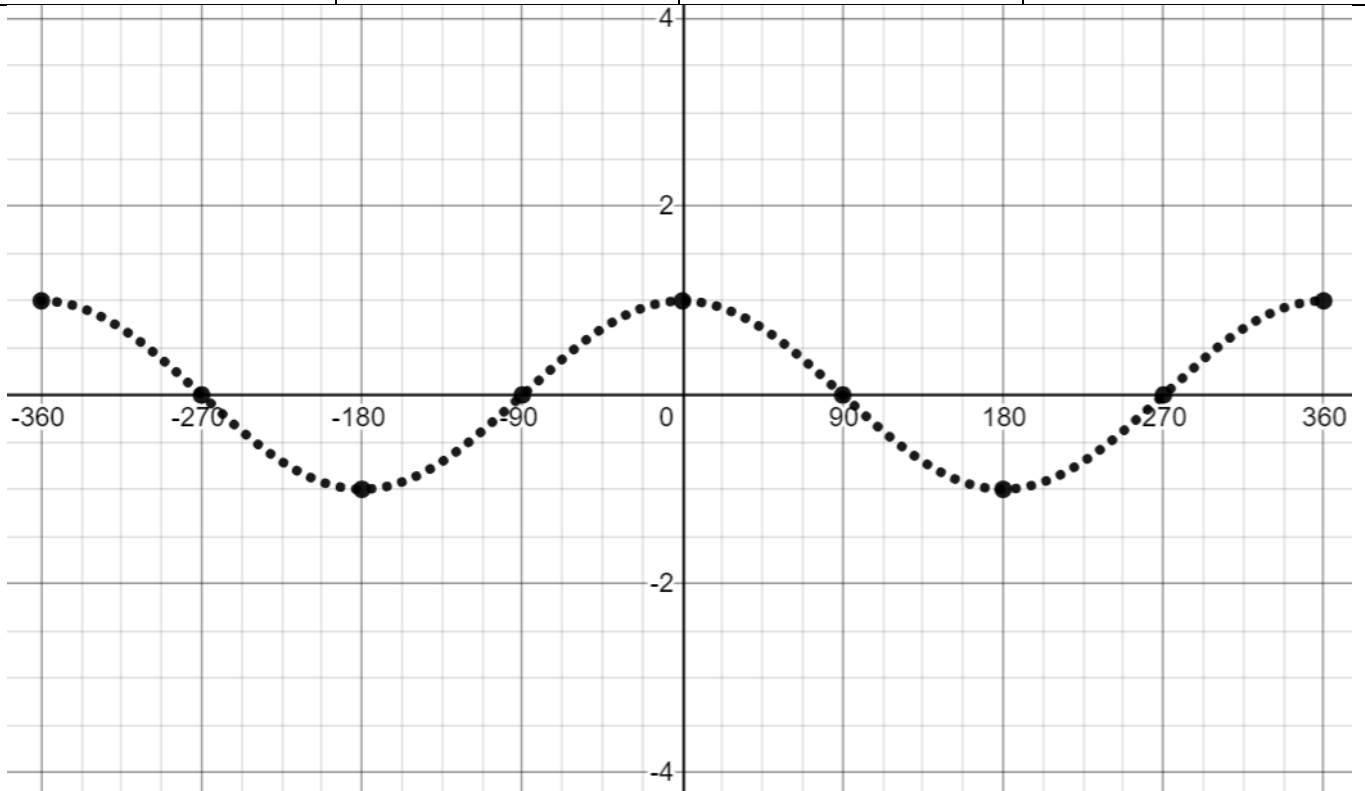


Explain the changes to the base function:

2. Complete the following table of values and graph each function in a different colour.

$y = 2 \cos x$	$y = \frac{1}{2} \cos(x)$
----------------	---------------------------

x	y	x	y
-360°		-360°	
-270°		-270°	
-180°		-180°	
-90°		-90°	
0°		0°	
90°		90°	
180°		180°	
270°		270°	
360°		360°	

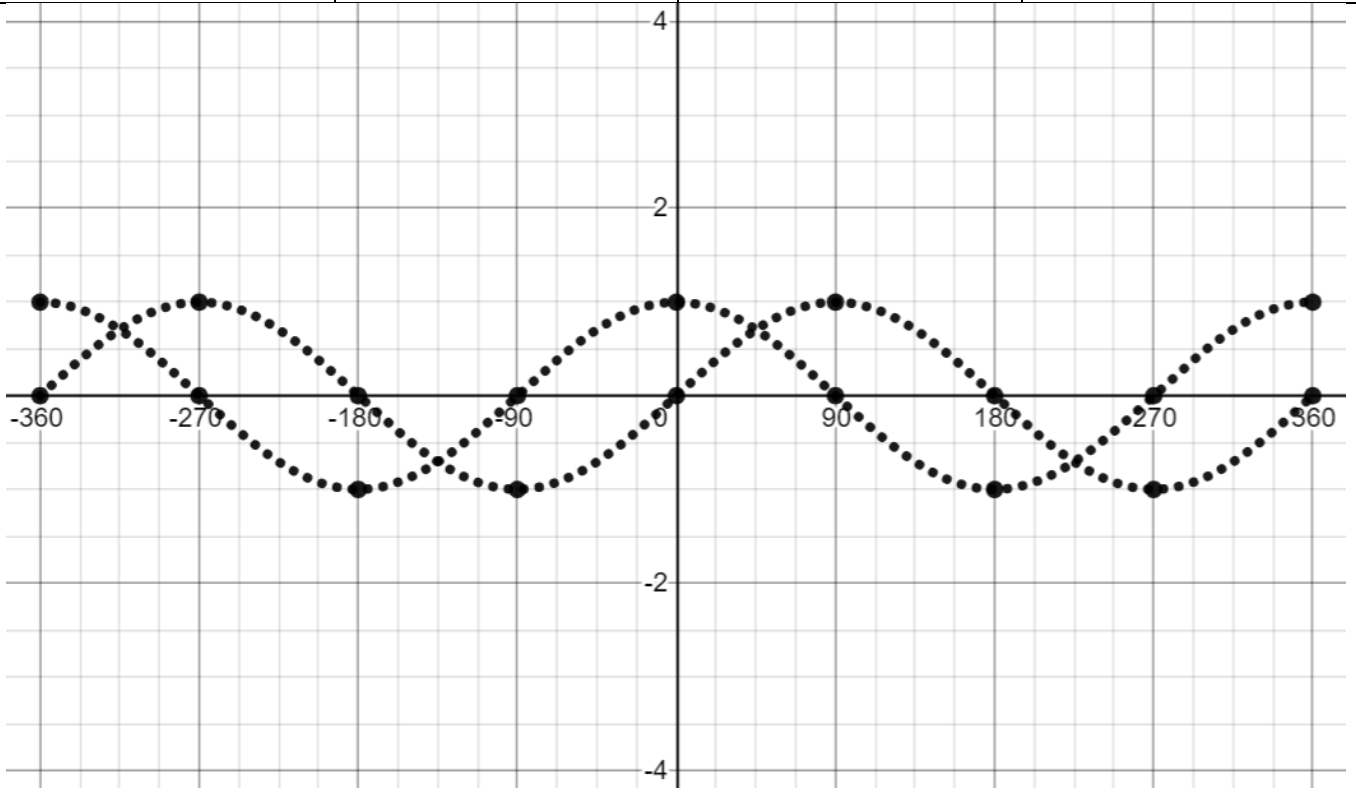


Explain the changes to the base function:

3. Complete the following table of values and graph each function in a different colour.

$y = -\cos(x)$	$y = -\sin(x)$
----------------	----------------

x	y	x	y
-360°		-360°	
-270°		-270°	
-180°		-180°	
-90°		-90°	
0°		0°	
90°		90°	
180°		180°	
270°		270°	
360°		360°	

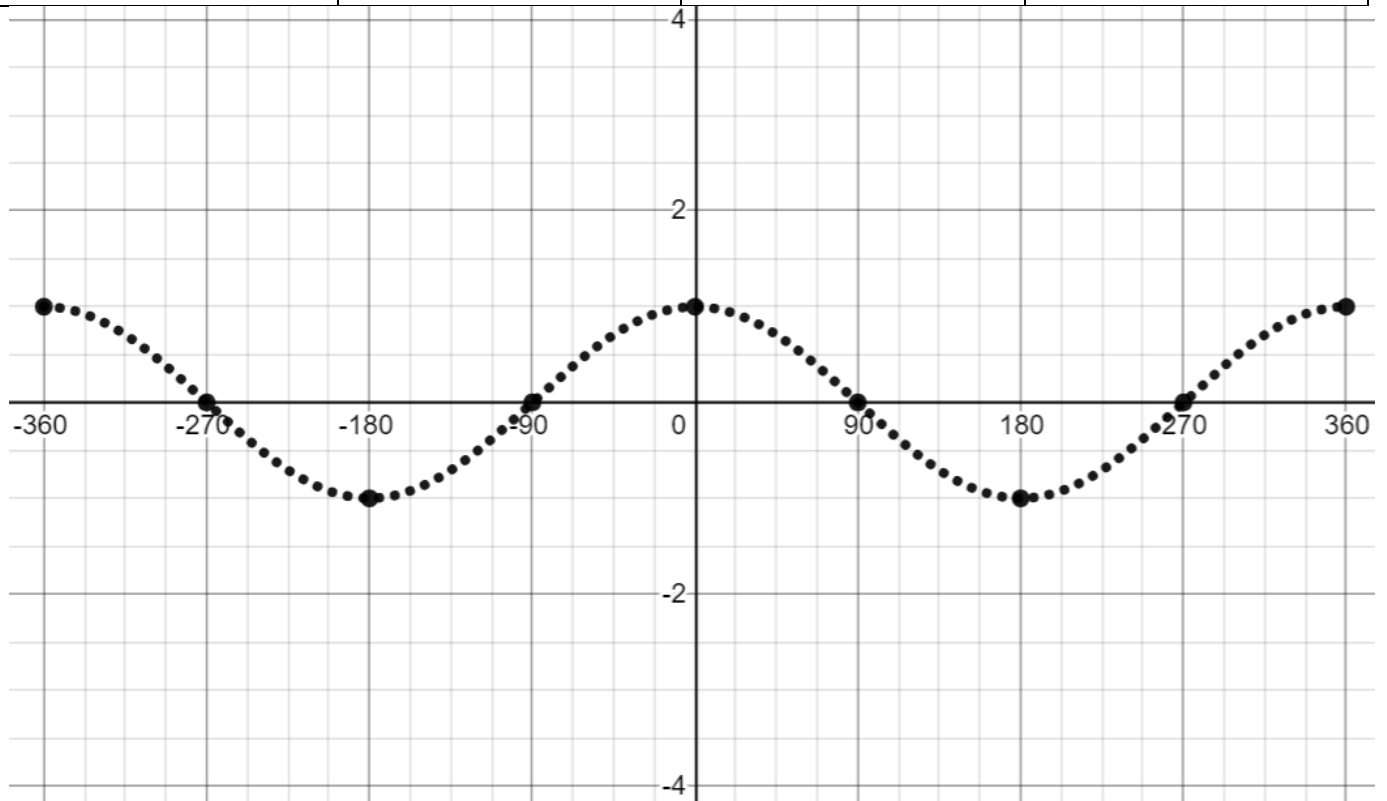


Explain the changes to the base function:

4. Complete the following table of values and graph each function in a different colour.

$y = \cos(x - 90^\circ)$	$y = \cos(x + 180^\circ)$
--------------------------	---------------------------

x	y	x	y
-360°		-360°	
-270°		-270°	
-180°		-180°	
-90°		-90°	
0°		0°	
90°		90°	
180°		180°	
270°		270°	
360°		360°	

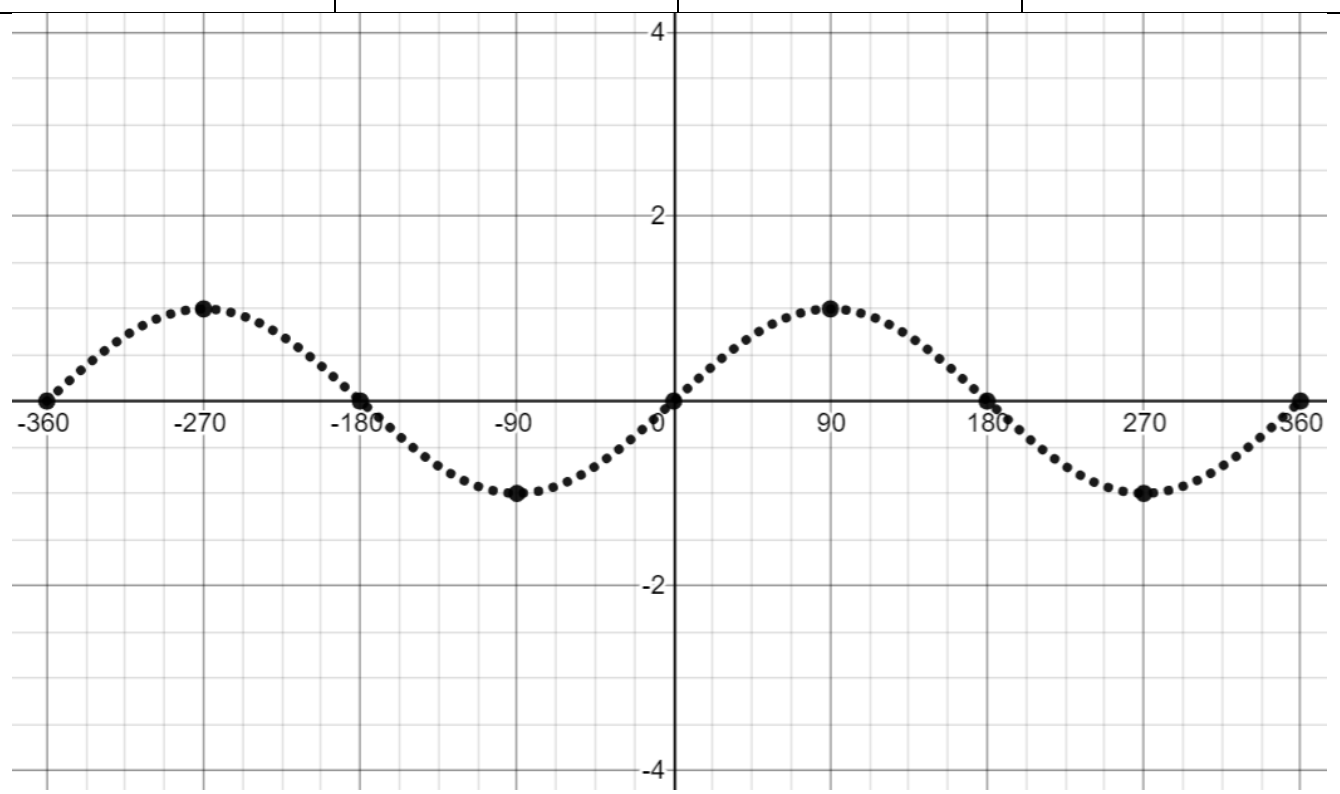


Explain the changes to the base function:

5. Complete the following table of values and graph each function in a different colour.

$y = \sin(2x)$	$y = \sin\left(\frac{x}{2}\right)$
----------------	------------------------------------

x	y	x	y
-180°		-360°	
-135°		-270°	
-90°		-180°	
-45°		-90°	
0°		0°	
45°		90°	
90°		180°	
135°		270°	
180°		360°	

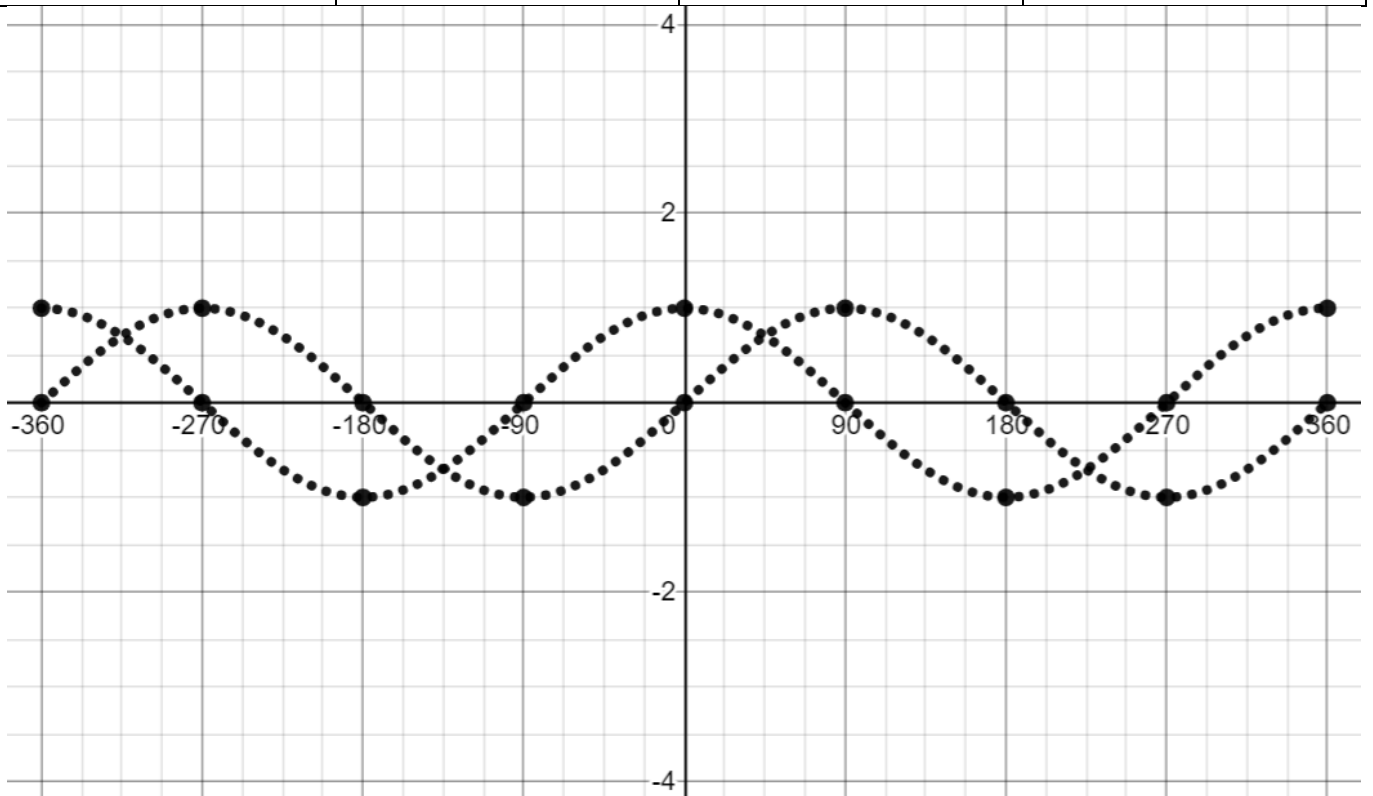


Explain the changes to the base function:

6. Complete the following table of values and graph each function in a different colour.

$y = \cos(-x)$	$y = \sin(-x)$
----------------	----------------

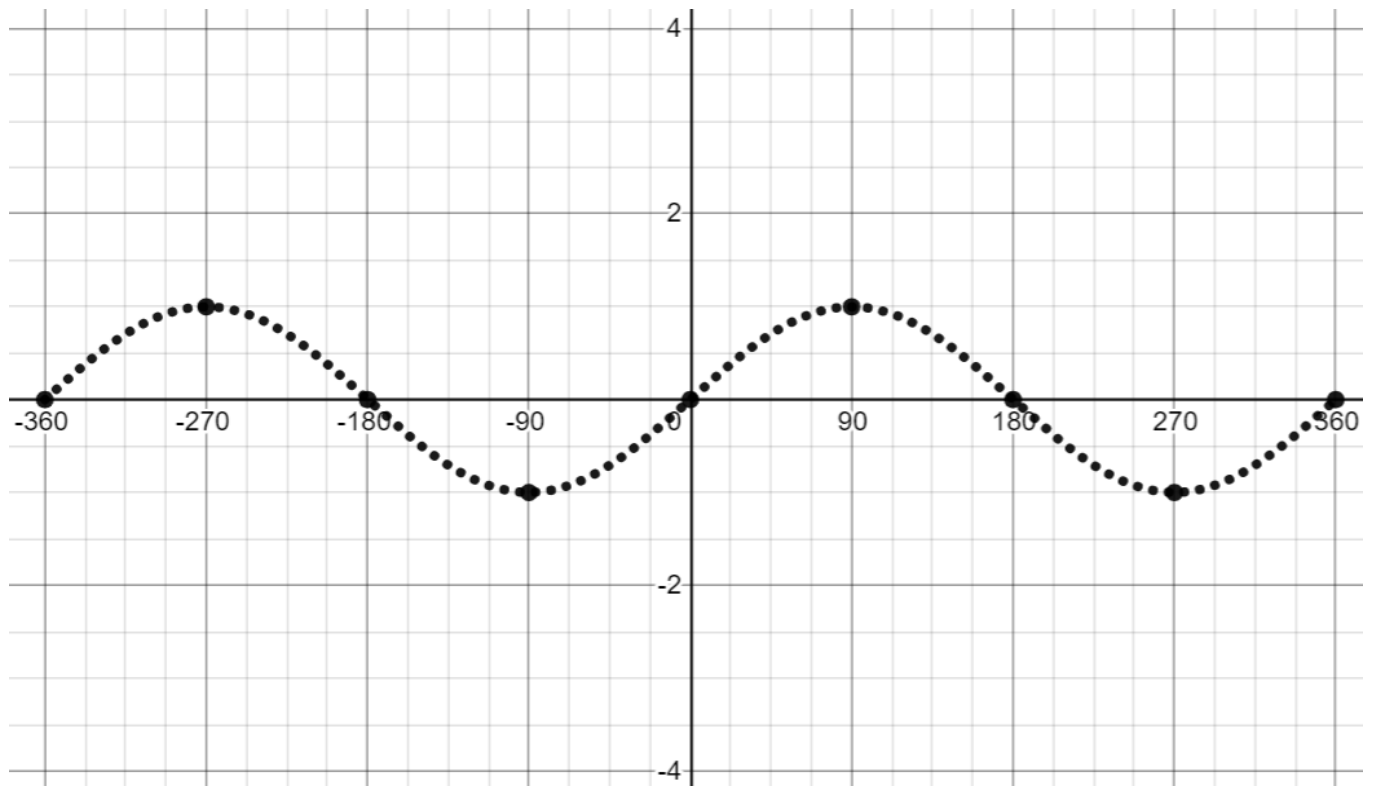
x	y	x	y
-360°		-360°	
-270°		-270°	
-180°		-180°	
-90°		-90°	
0°		0°	
90°		90°	
180°		180°	
270°		270°	
360°		360°	



Explain the changes to the base function:

7. Complete the following table of values and graph each function in a different colour.

$y = 2 \sin(x + 60^\circ) - 1$		$y = -\sin(2x - 60^\circ) + 2$	
x	y	x	y
-330°		-150°	
-240°		-105°	
-150°		-60°	
-60°		-15°	
30°		30°	
120°		75°	
210°		120°	
300°		165°	
		210°	

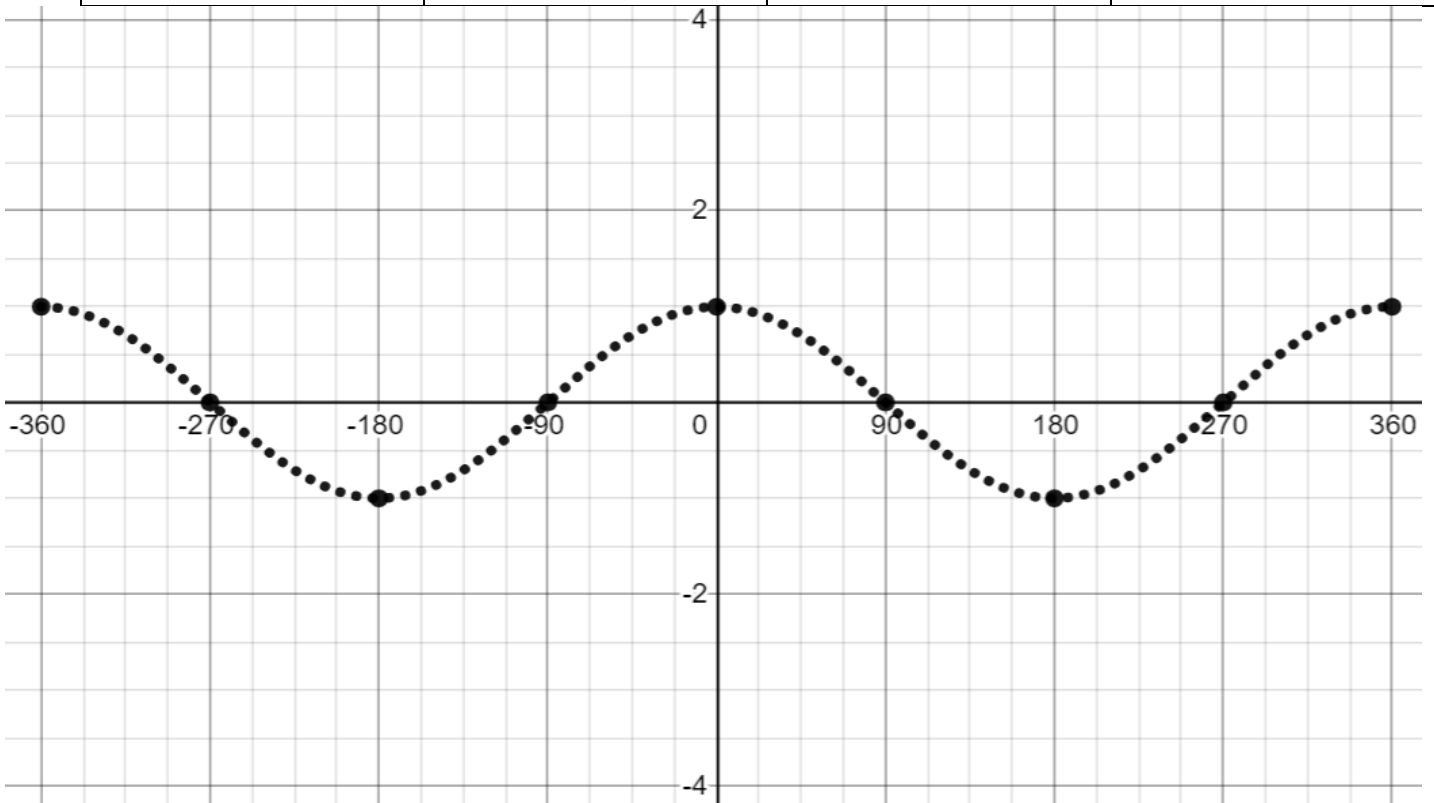


Explain the changes to the base function:

8. Complete the following table of values and graph each function in a different colour.

$y = 3 \cos(2x)$	$y = -2 \cos(x + 270^\circ) - 1$
------------------	----------------------------------

x	y	x	y
-180°		-360°	
-135°		-270°	
-90°		-180°	
-45°		-90°	
0°		0°	
45°		90°	
90°		180°	
135°		270°	
180°		360°	



Explain the changes to the base function: