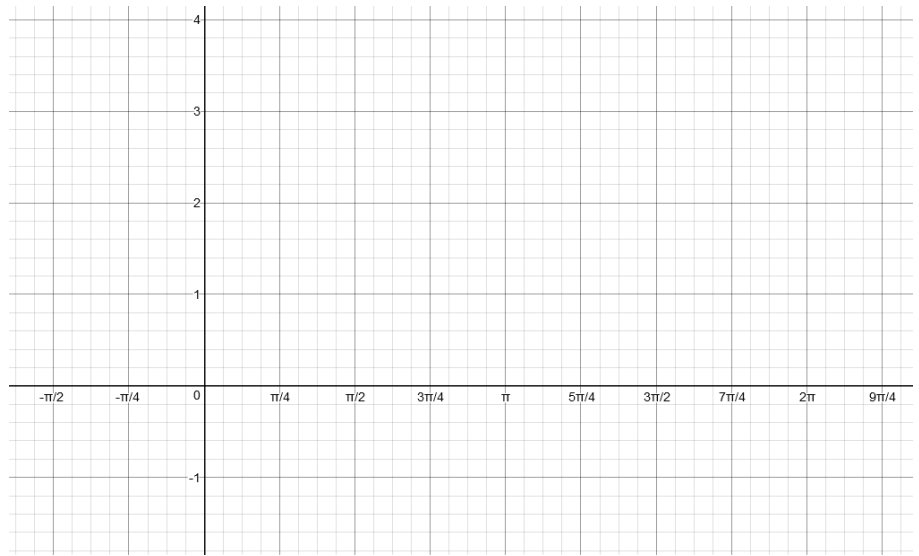


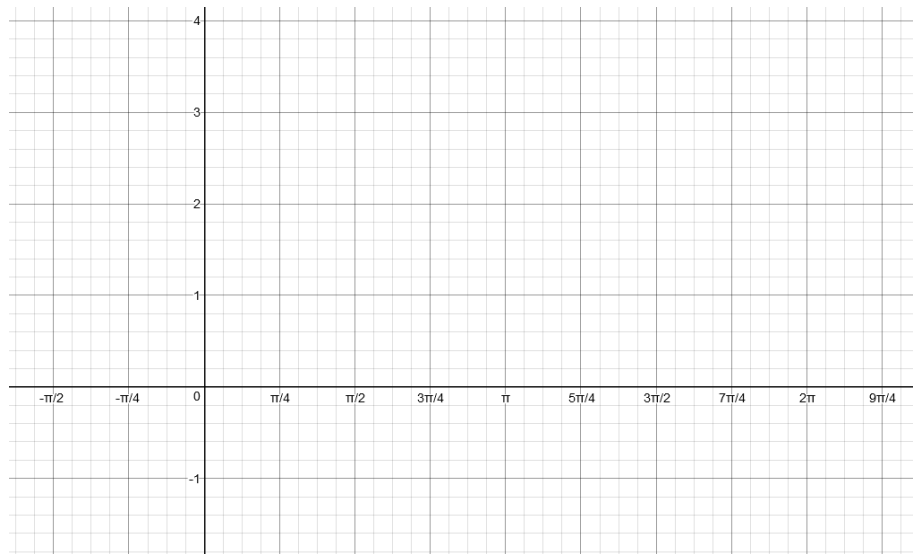
MHF4U
Trigonometric Functions

1. Graph by using transformations.

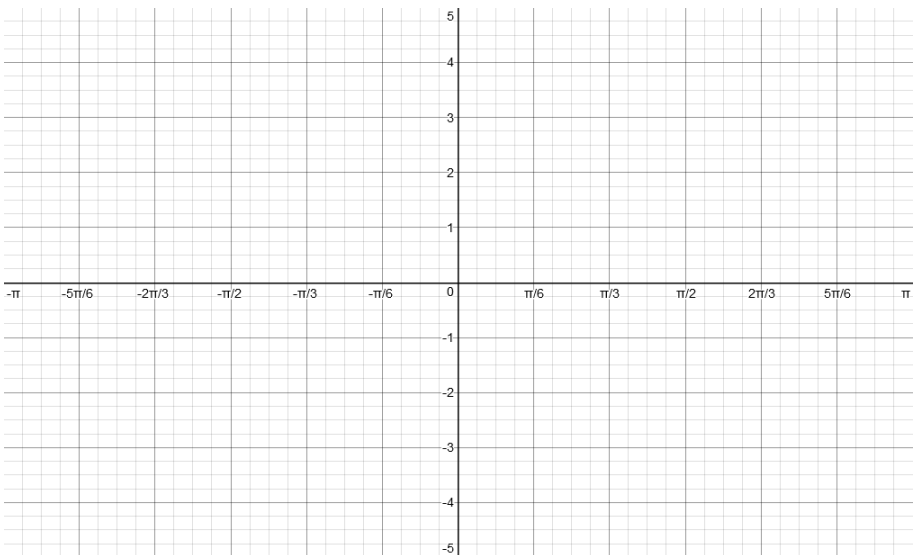
a) $y = -\sin(x + \pi/4) + 2$



b) $y = 2\cos\left(\frac{\pi}{2} - 2x\right)$



c) $y = -\tan(3x + \pi)$



2. Describe the transformations involved.

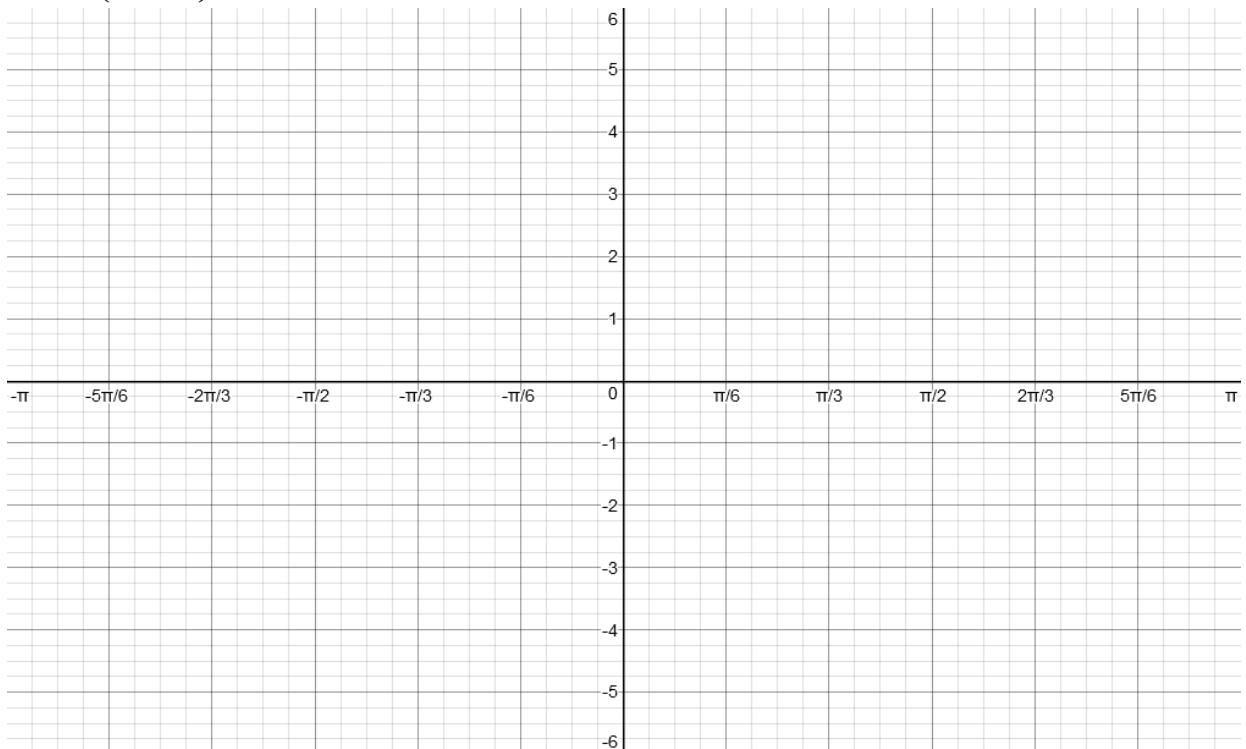
$$y = -4 \sin\left(\frac{\pi}{2} - 3x\right) + 5$$

3. Write the equation of the trigonometric function $y = \cos x$ after the following transformations:

- Reflection in the x-axis
- Vertical compression by 0.5
- Reflection in the y-axis
- Horizontal expansion by 3
- Horizontal shift to the left by $\pi/2$
- Vertical shift down by 4

4. Graph the following function by using a method at your convenience.

$$y = -3 \cos\left(\frac{\pi}{2} - 3x\right) + 2$$



5. Match the equations on the left to the graphs on the right. Some equations may not have a corresponding graph.

<p>a) $y = -\sin(x + \pi/2) - 1$</p> <p>b) $y = -\sin(x + \pi/2)$</p> <p>c) $y = \sin(x - \pi/2) + 1$</p> <p>d) $y = -\sin x + 2$</p>	<p>I)</p>	<p>II)</p>
<p>e) $y = -\sin x - 2$</p> <p>f) $y = \sin(x + \pi/2) - 2$</p>	<p>III)</p>	<p>IV)</p>