

1. Sine Transformation $y = \frac{-1}{2} \sin(3x)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

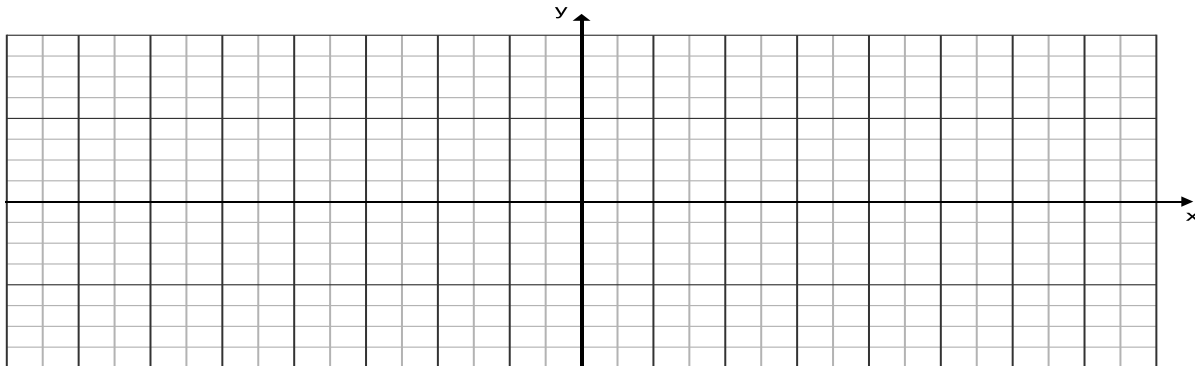


Table 1
 $y = \sin x$

x	y
0	0
$\frac{\pi}{2}$	1
π	0
$\frac{3\pi}{2}$	-1
2π	0

Table 2
Multiply y from sine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of Table 2 in y values and solutions to A, B, C, D, E Equations in x values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for sine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

2. Cosine Transformation $y = 5 \cos\left(\frac{3}{2}x\right)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

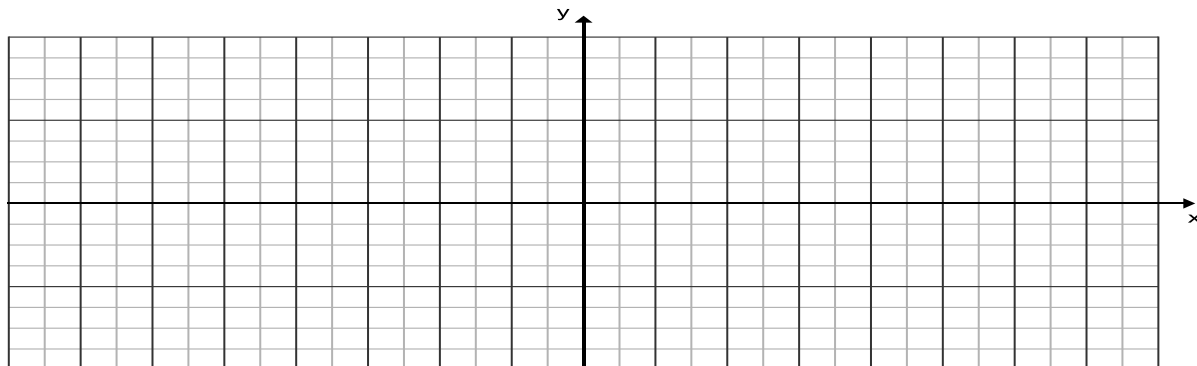


Table 1
 $y = \cos x$

x	y
0	1
$\frac{\pi}{2}$	0
π	-1
$\frac{3\pi}{2}$	0
2π	1

Table 2
Multiply y from cosine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of Table 2 in y values and solutions to A, B, C, D, E Equations in x values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for cosine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

3. Sine Transformation $y = -3\sin\left(\frac{2}{3}\pi x\right)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

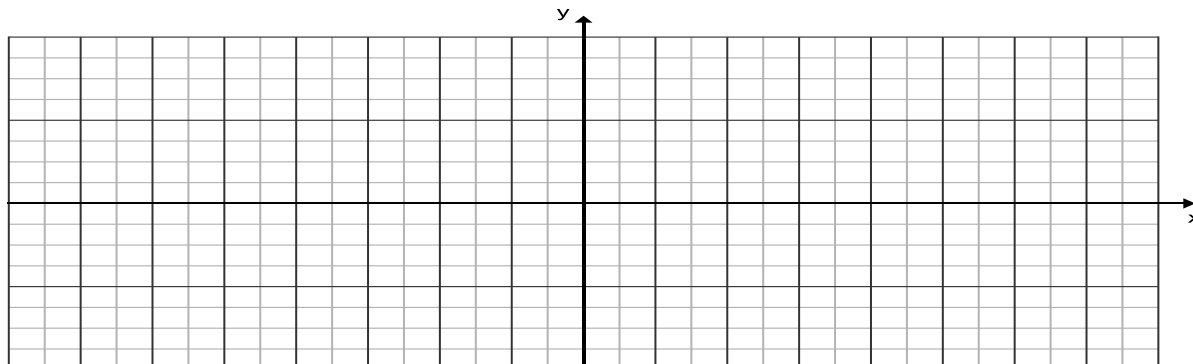


Table 1
 $y = \sin x$

x	Y
0	0
$\frac{\pi}{2}$	1
π	0
$\frac{3\pi}{2}$	-1
2π	0

Table 2
Multiply y from
sine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of
Table 2 in y values
and solutions to A, B,
C, D, E Equations in x
values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for sine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

4. Cosine Transformation $y = -\cos\left(\frac{3}{4}x\right)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

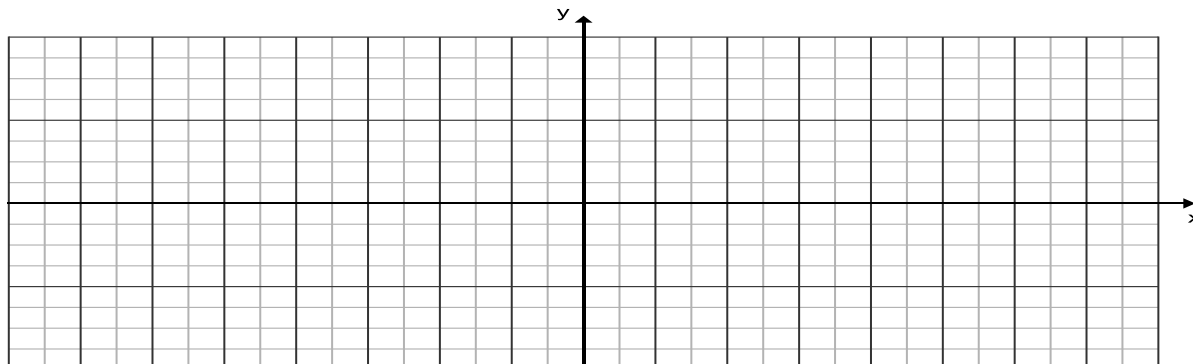


Table 1
 $y = \cos x$

x	Y
0	1
$\frac{\pi}{2}$	0
π	-1
$\frac{3\pi}{2}$	0
2π	1

Table 2
Multiply y from cosine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of Table 2 in y values and solutions to A, B, C, D, E Equations in x values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for cosine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

5. Sine Transformation $y = 3\sin\left(\frac{1}{4}x\right)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

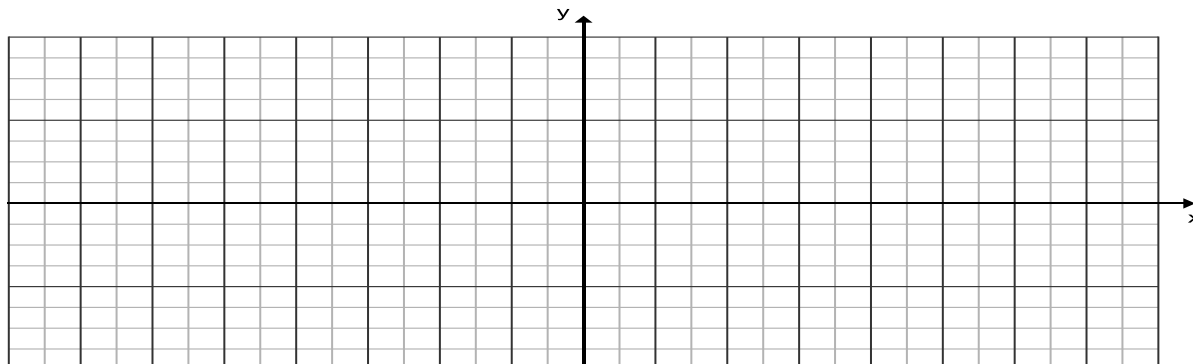


Table 1
 $y = \sin x$

x	Y
0	0
$\frac{\pi}{2}$	1
π	0
$\frac{3\pi}{2}$	-1
2π	0

Table 2
Multiply y from
sine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of
Table 2 in y values
and solutions to A, B,
C, D, E Equations in x
values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for sine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

6. Cosine Transformation $y = -4\cos(3\pi x)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

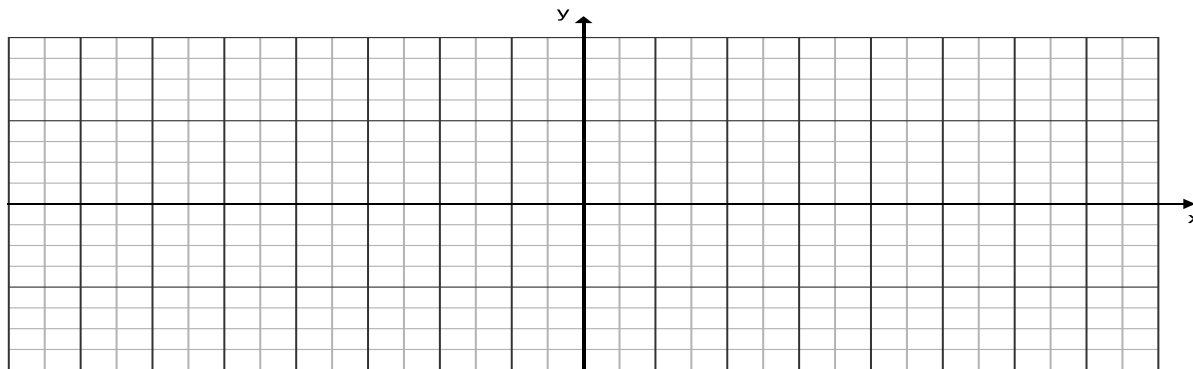


Table 1
 $y = \cos x$

x	Y
0	1
$\frac{\pi}{2}$	0
π	-1
$\frac{3\pi}{2}$	0
2π	1

Table 2
Multiply y from cosine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of Table 2 in y values and solutions to A, B, C, D, E Equations in x values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for cosine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

7. Sine Transformation $y = -4\sin\left(\frac{1}{3}\pi x\right)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

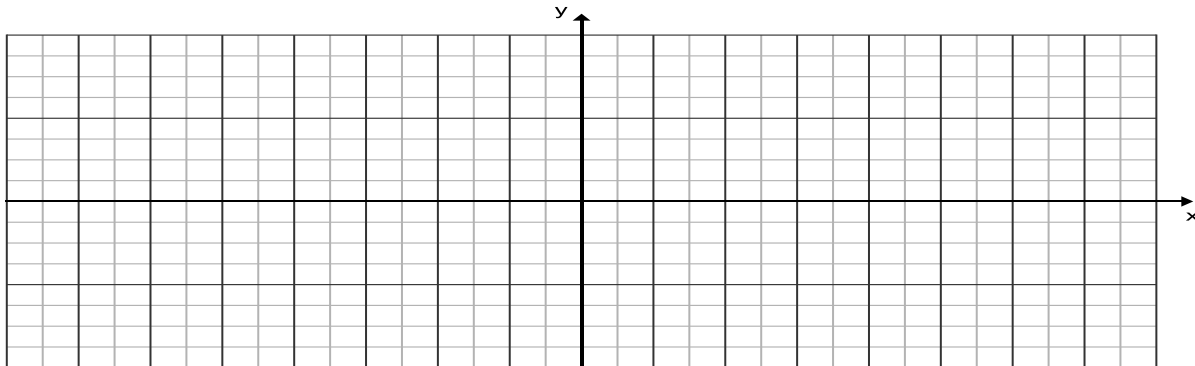


Table 1
 $y = \sin x$

x	y
0	0
$\frac{\pi}{2}$	1
π	0
$\frac{3\pi}{2}$	-1
2π	0

Table 2
Multiply y from
sine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of
Table 2 in y values
and solutions to A, B,
C, D, E Equations in x
values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for sine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

8. Cosine Transformation $y = -5\cos(10x)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

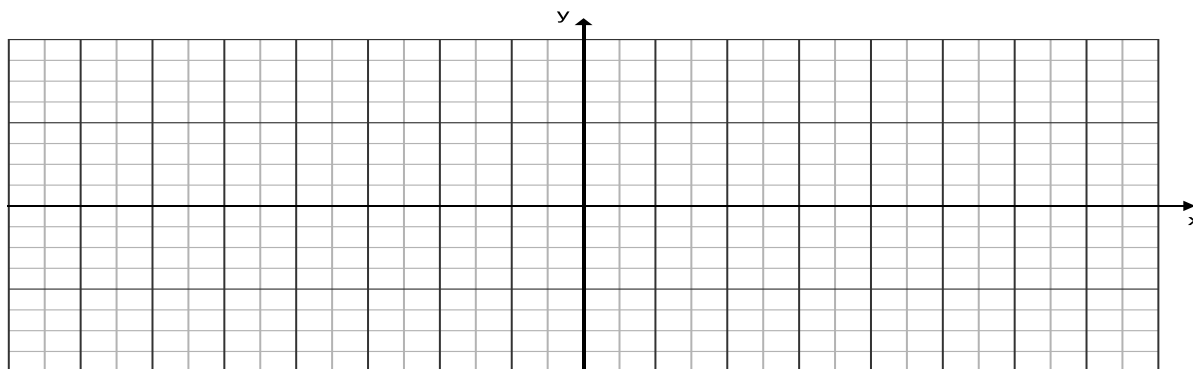


Table 1
 $y = \cos x$

x	y
0	1
$\frac{\pi}{2}$	0
π	-1
$\frac{3\pi}{2}$	0
2π	1

Table 2
Multiply y from cosine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of Table 2 in y values and solutions to A, B, C, D, E Equations in x values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for cosine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

8. Sine Transformation $y = 3\sin(4\pi x)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

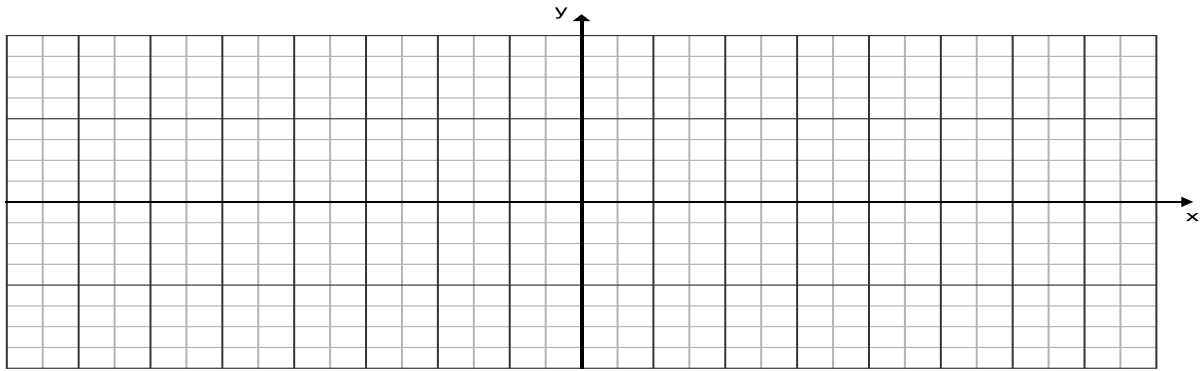


Table 1
 $y = \sin x$

x	y
0	0
$\frac{\pi}{2}$	1
π	0
$\frac{3\pi}{2}$	-1
2π	0

Table 2
Multiply y from sine table by a

x	y
A	
B	
C	
D	
E	

Table 3
Put the results of Table 2 in y values and solutions to A, B, C, D, E Equations in x values

x	Y

True or false

1. ____ This is a horizontal translation (a.k.a. PHASE SHIFT)
2. ____ This is a vertical translation
3. ____ This is a horizontal compression
4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for sine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

10. Cosine Transformation $y = \frac{-5}{2} \sin\left(\frac{4}{3}x\right)$ AMPLITUDE _____ PERIOD _____

Sketch and label TWO periods of this function on the grid below (YOU DECIDE THE SCALES)

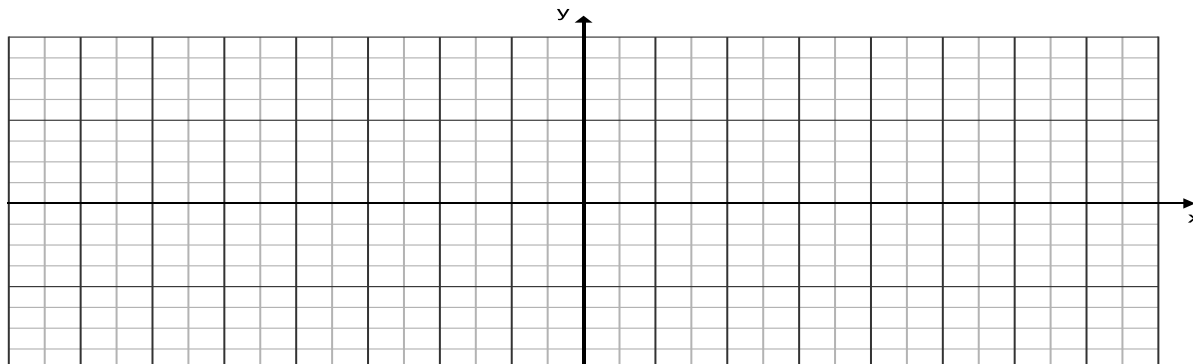


Table 1
 $y = \cos x$

x	y
0	1
$\frac{\pi}{2}$	0
π	-1
$\frac{3\pi}{2}$	0
2π	1

Table 2
Multiply y from cosine table by a

x	y
A	
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4. ____ This is a vertical compression
5. ____ This is a horizontal stretch
6. ____ This is a vertical stretch
7. ____ This is a vertical reflection

Set bx equal to all special values of x for cosine and solve for x

A equation	B equation	C equation
D equation	E equation	State three minimum points State three maximum points

