Name: _____

Problem Set 3.8

1 – 10] Match the graphs with the functions.

_____1.) $f(x) = 4\sin(x)$

_____2.) $f(x) = 4\cos(x)$

_____3.) $f(x) = 4\sin(2x)$

_____4.) $f(x) = 4\cos(2x)$

_____5.) $f(x) = -2\sin(x)$

_____6.) $f(x) = -2\cos(3x)$

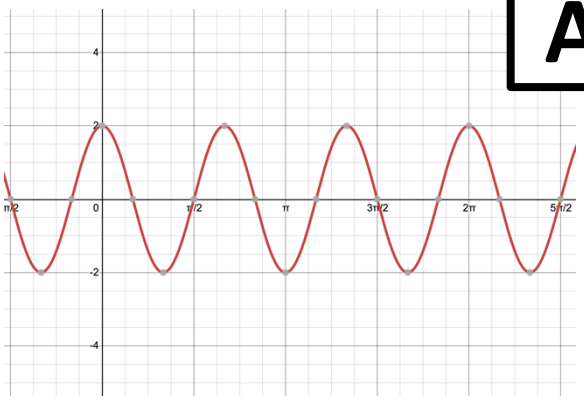
_____7.) $f(x) = 2\sin(x + \frac{\pi}{2})$

_____8.) $f(x) = 2\cos(3x)$

_____9.) $f(x) = 3\sin(2x)$

_____10.) $f(x) = 3\cos(3x)$

A



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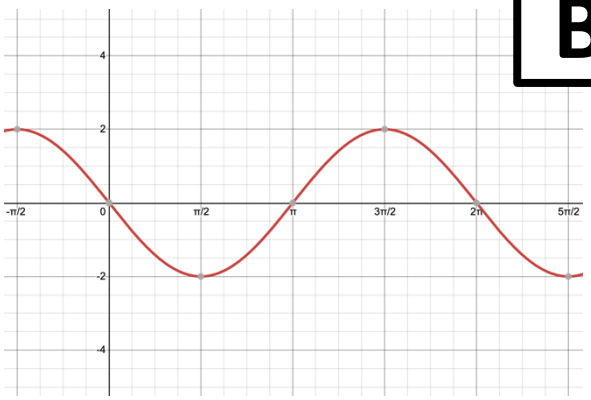

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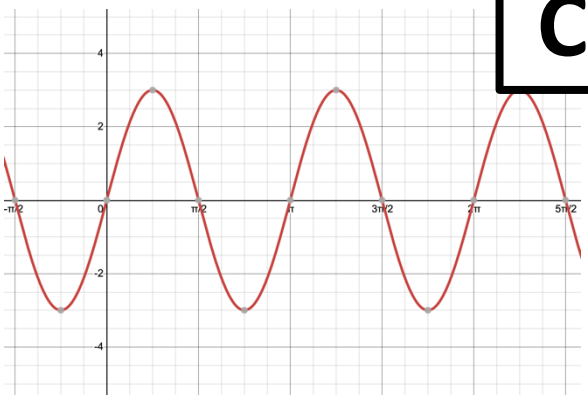

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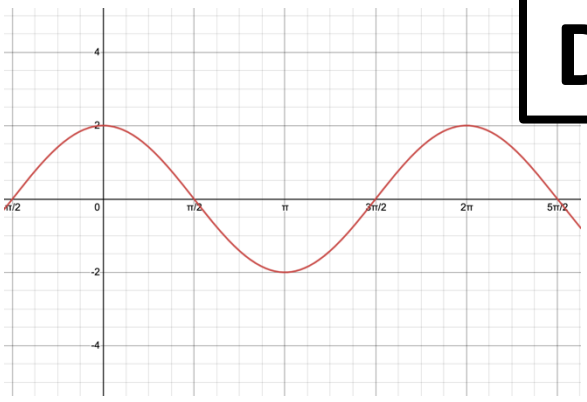

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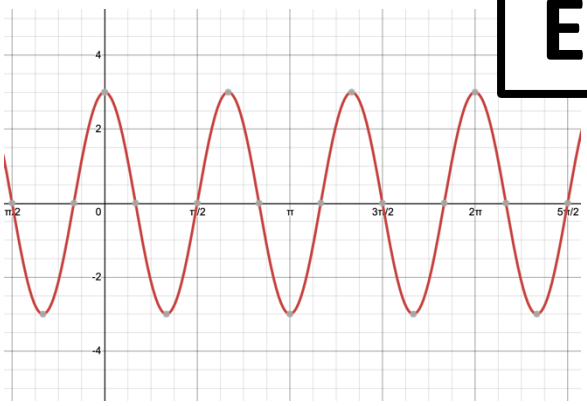

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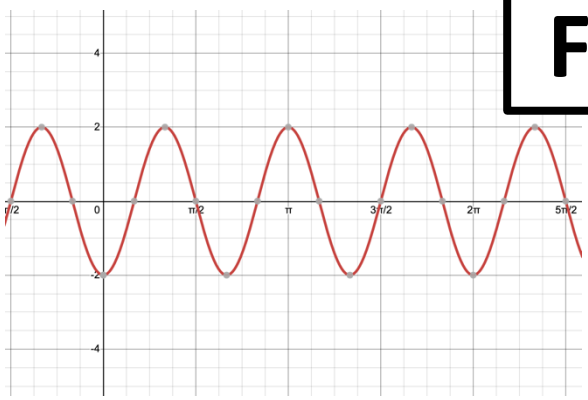

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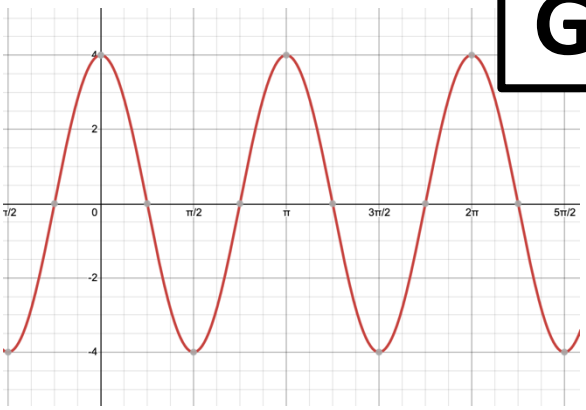

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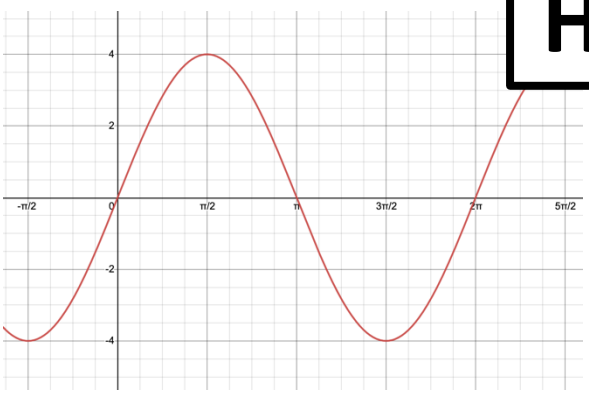
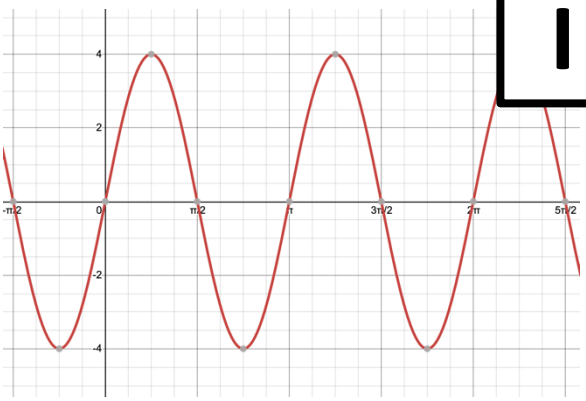
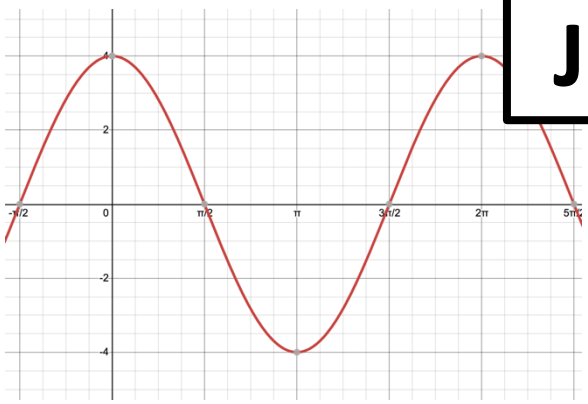


I



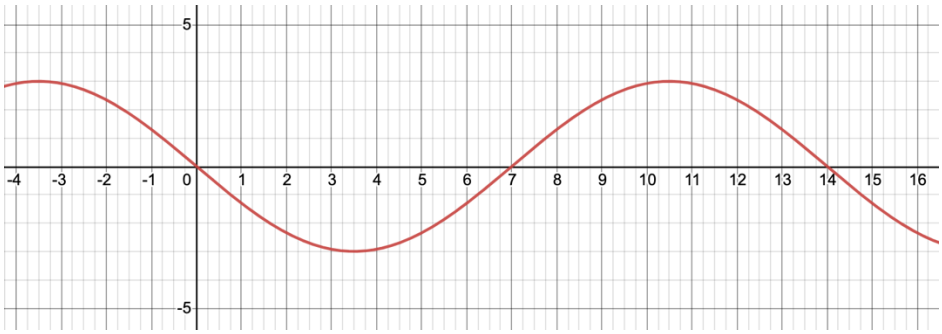
J



11.) What is the amplitude and period of the function $f(x) = 6\sin(5x)$?

Amplitude: _____ Period: _____

12.) What is the amplitude and period of the function graphed below? What would be the functions "a" and "b" values?



Amplitude: _____ Period: _____

a: _____ b: _____

13.) List the transformations being done to y = sin(x) to produce the graph of f(x). Would is the domain, range, amplitude, and period of f(x)?

$$f(x) = 8\sin\left(x - \frac{\pi}{2}\right) + 1$$

Transformations:

Domain:
Range:
Amplitude:
Period:

14.) List the transformations being done to y = cos(x) to produce the graph of f(x). Would is the domain, range, amplitude, and period of f(x)?

$$f(x) = -\cos(4x) - 12$$

Transformations:

Domain:
Range:
Amplitude:
Period:

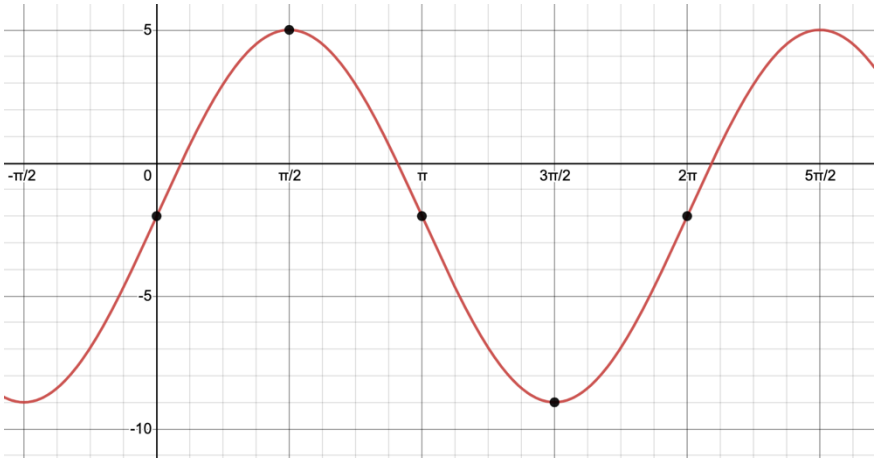
15.) List the transformations being done to y = sin(x) to produce the graph of f(x). Would is the domain, range, amplitude, and period of f(x)?

$$f(x) = 2.5\sin\left(\frac{\pi}{6}x\right)$$

Transformations:

Domain:
Range:
Amplitude:
Period:

16.) The function below is a sine function. Write the equation of the graphed function.



17.) Now the function below is a cosine function. Write the equation of the graphed function.