

## Warm up

Airplane Task in groups of 2 or 3

Workbook p 133-134

$$-150 \cos\left(\frac{\pi}{30}x\right) + 250$$

amp.

$$150 \sin\left(\frac{\pi}{30}(x-15)\right) + 250$$

v.s. = midline

$$\frac{2\pi}{b} \leftrightarrow \frac{60}{T}$$

$$\frac{2\pi}{60} = b$$

$$\frac{\pi}{30}$$

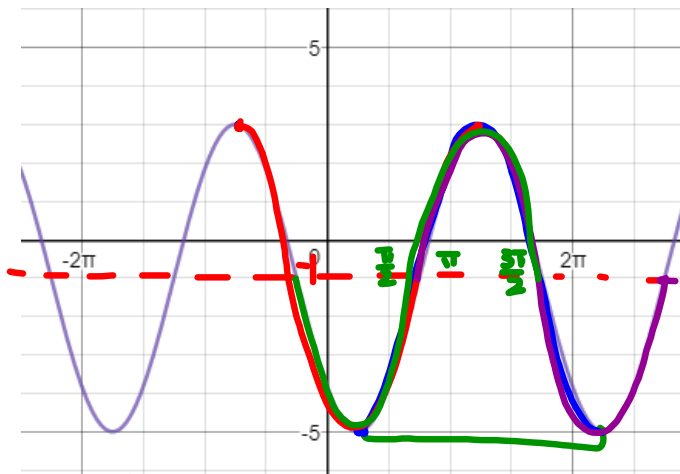
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Finding equations from graphs

Notes - WB p 112

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Find one sine and one cosine curve for the graph below.

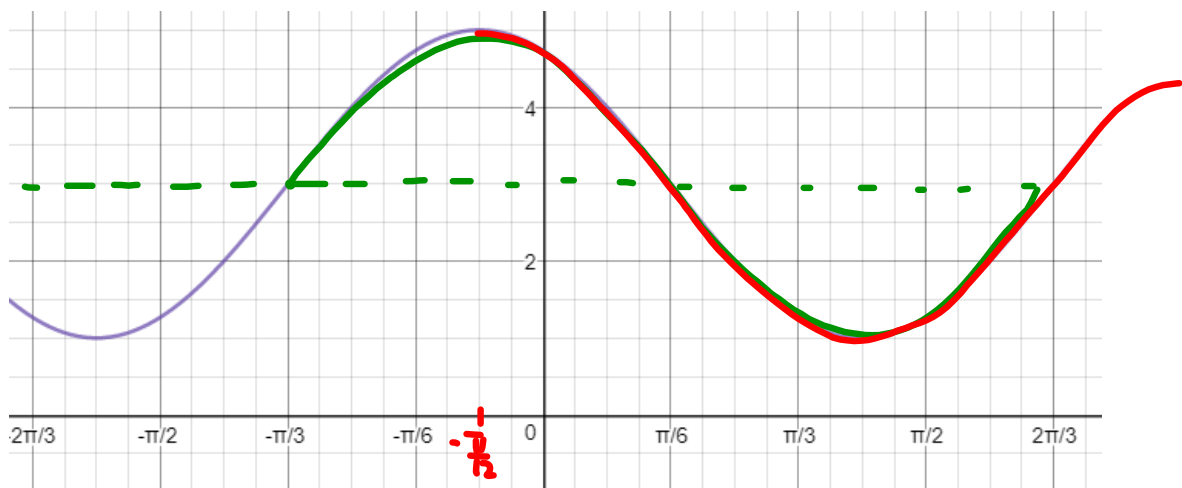


midline = -1  
 per =  $2\pi$   
 amp = 4

$-4\cos(x - \frac{\pi}{4}) - 1$   
 $4\cos(x + \frac{3\pi}{4}) - 1$

$4\sin(x - \frac{3\pi}{4}) - 1$   
 $-4\sin(x + \frac{\pi}{4}) - 1$

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midline = 3  
 amp = 2  
 per =  $\pi$   
 $\frac{2\pi}{b} = \pi$   
 $b = 2$

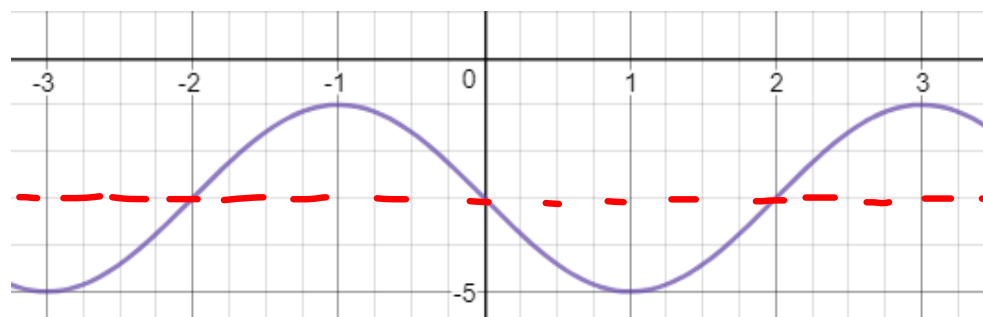
$2\sin(2(x + \frac{\pi}{3})) + 3$

$2\cos(2(x + \frac{\pi}{2})) + 3$

$\frac{\pi}{3} - \frac{\pi}{4} = \frac{\pi}{12}$

$\frac{4\pi}{12} - \frac{3\pi}{12} = \frac{\pi}{12}$

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$$y = 2\cos\left(\frac{\pi}{2}(x+1)\right) - 3$$

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

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## HOMWORK



Workbook p 113-114

1-6

Feb 2-9:51 PM