FOM 12 Review Resource: Sinusoidal Curves

1. On each graph below, write down
2. The amplitude
3. The sinusoidal axis
4. The period
5. The range of $f$
6. The coordinates of the first maximum point and of the first minimum point.
7. The function in the form $f\left(x\right)=a\sin(\left(bx\right)°+d) $or $f\left(x\right)=a\cos(\left(bx\right)°+d)$

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2.

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| $$f\left(x\right)=3\sin((4x°)+5)$$Write down:1. The amplitude
2. The sinusoidal axis
3. The period
4. The range of $f$
5. The coordinates of the first maximum point.
6. Draw the graphs of the first period of each curve:

 | $$g\left(x\right)=-\cos(5x°-3)$$Write down:1. The amplitude
2. The sinusoidal axis
3. The period
4. The range of $f$
5. The coordinates of the first maximum point.
6. Draw the graphs of the first period of each curve:

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1. **Regression Tool:**

A cuckoo clock is hanging on a wall. The table below gives the height of the pendulum above the ground as the clock ticks.



1. Plot the data
2. Find a sinusoidal model (function) for the data set. Write it down.

(c) Use the model to find the height of the pendulum when t = 2.2 seconds. Is this an example of interpolation or extrapolation?

(d) Use the model to find the height of the pendulum when t = 4.2 seconds. Is this an example of interpolation or extrapolation?