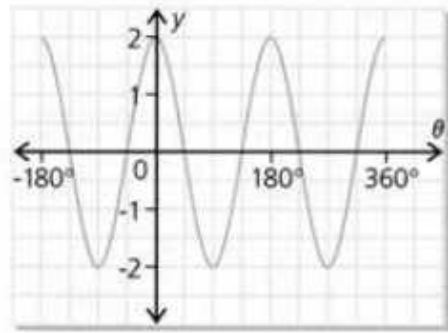


### MCF3M Sinusoidal Functions Questions

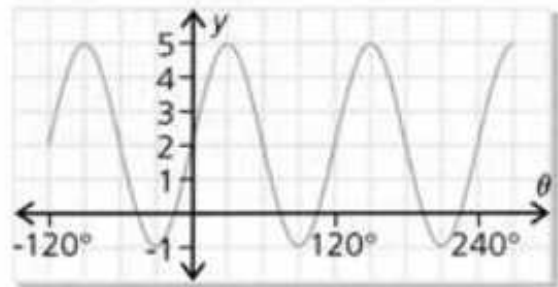
1. For this curve, what is the:

- a) Amplitude
- b) Axis of the Curve
- c) Period



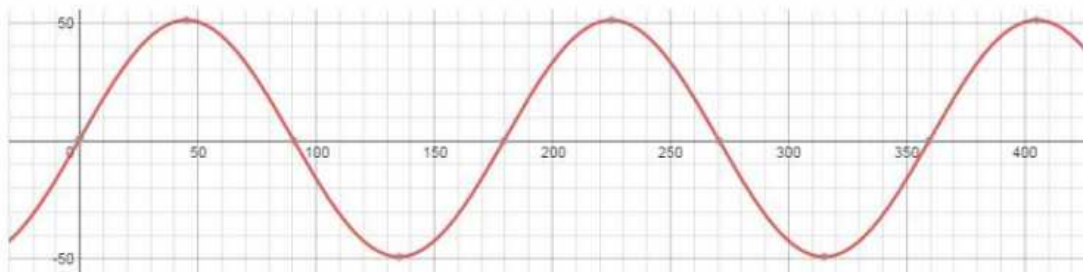
2. For this curve, what is the:

- a) Amplitude
- b) Axis of the Curve
- c) Period



3. For this curve, what is the:

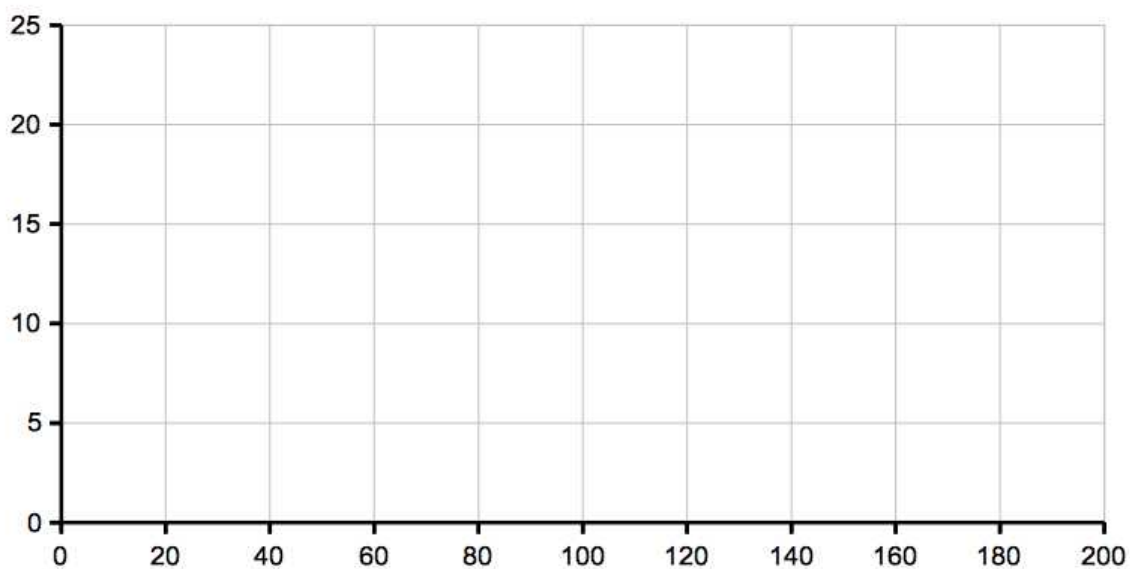
- a) Amplitude
- b) Axis of the Curve
- c) Period



4. A Ferris Wheel has a diameter of 20 m, and its centre is 13 m off the ground. It rotates once every 90 seconds.

A graph is made of your height on the Ferris wheel versus time.

- a) What is its amplitude?
- b) What is its axis of the curve?
- c) What is its maximum height?
- d) What is its minimum height?
- e) What is its period?
- f) Sketch **two cycles** of the graph.

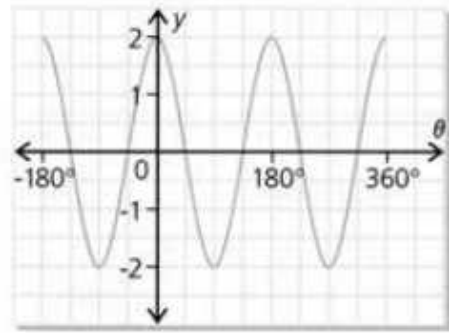


- g) Use the graph to estimate your height after 40 seconds.

### MCF3M Sinusoidal Functions Questions

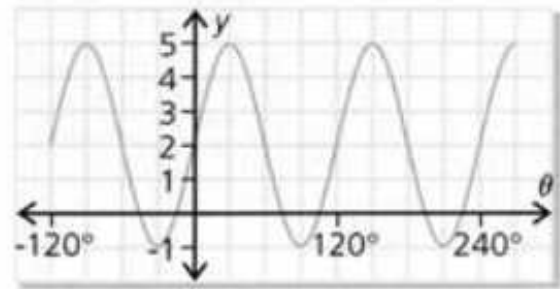
1. For this curve, what is the:

- a) Amplitude            **2**
- b) Axis of the Curve     **$y=0$**
- c) Period                  **$180^\circ$**



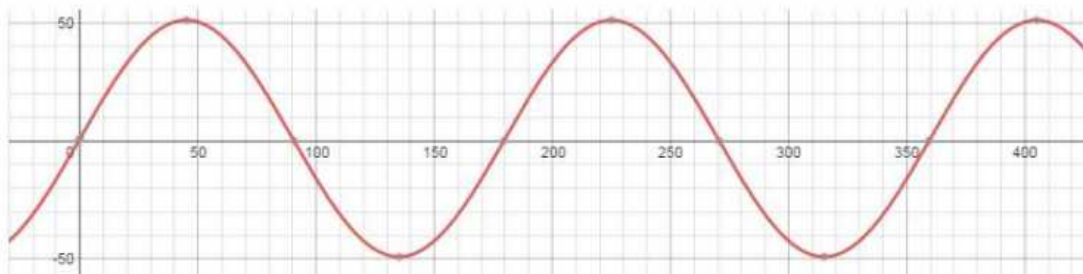
2. For this curve, what is the:

- a) Amplitude            **3**
- b) Axis of the Curve     **$y=2$**
- c) Period                  **$120^\circ$**



3. For this curve, what is the:

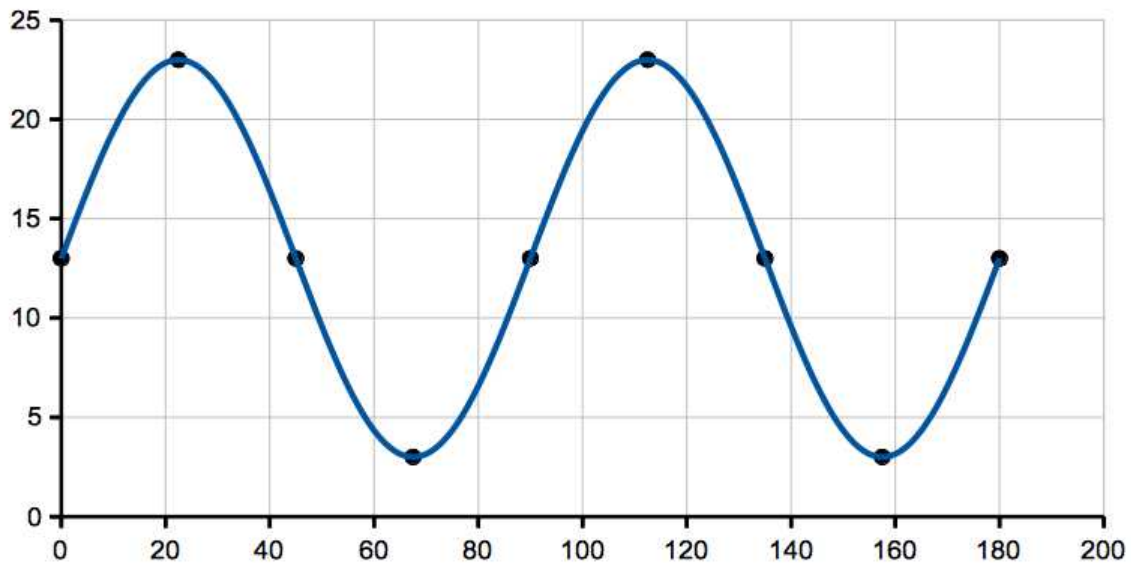
- a) Amplitude            **50**
- b) Axis of the Curve     **$y=0$**
- c) Period                  **$180^\circ$**



4. A Ferris Wheel has a diameter of 20 m, and its centre is 13 m off the ground. It rotates once every 90 seconds.

A graph is made of your height on the Ferris wheel versus time.

- a) What is its amplitude? **10 m (radius = half the diameter)**
- b) What is its axis of the curve?  **$y=13$**
- c) What is its maximum height? **23 (10 above the middle, which is 13)**
- d) What is its minimum height? **3 (10 below the middle, which is 13)**
- e) What is its period? **90 (given)**
- f) Sketch **two cycles** of the graph.



- g) Use the graph to estimate your height after 20 seconds.

According the graph, at 40 seconds you are ~ 16 m high.  
If you got 15 or 17 that's fine too, it depends on how you drew your curve.