

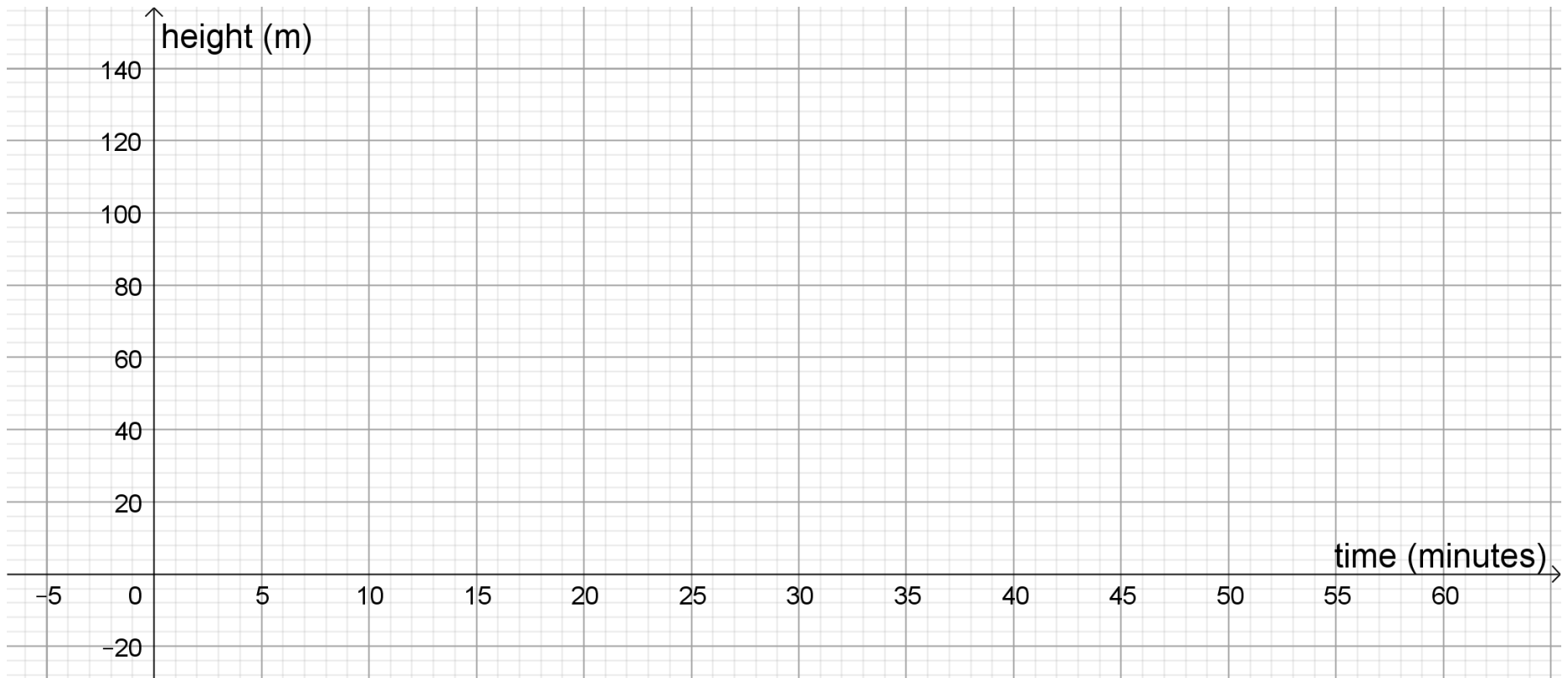
## Periodic Data

### The London Eye

It takes about 30 minutes to complete a rotation on the London Eye. When boarding, the capsule is about 15 meters above the ground. At the top, the capsule is 135 meters above the ground.

Calculate the time and the height at the beginning of the ride, quarter way around, half way around, three quarters way around, at the end.

Draw a graph to show the height of the chair on the London Eye during two revolutions.



## Engine Capacity: Volume Displacement

A single cylinder in a 4 cylinder engine that has 1.6L capacity has volume 400 cubic centimeters.

Suppose at time zero, the piston is in the lowest position so that the capacity of the cylinder is 400 cc. At the top of the cycle, the air/fuel mix is compressed into a much smaller volume (the compression chamber), in this example, 50cc.

When an engine runs at 2000 rpm the piston will complete a cycle in ..... seconds.

Draw a graph to show the volume of the chamber at time  $t$  seconds.

