Q1. The London Eye is one of the largest observation wheels in the world.



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The passengers ride in capsules. Each capsule moves in a circular path and accelerates.

(a) Explain how the wheel can move at a steady speed and the capsules accelerate at the same time.

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(2)

(b) In which direction is the resultant force on each capsule?

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(1)

(c) The designers of the London Eye had to consider **three** factors which affect the resultant force described in part (b).

Two factors that increase the resultant force are:

- an increase in the speed of rotation
- an increase in the total mass of the wheel, the capsules and the passengers.

Name the other factor that affects the resultant force and state what effect it has on the resultant force.

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(1)
(Total 4 marks)