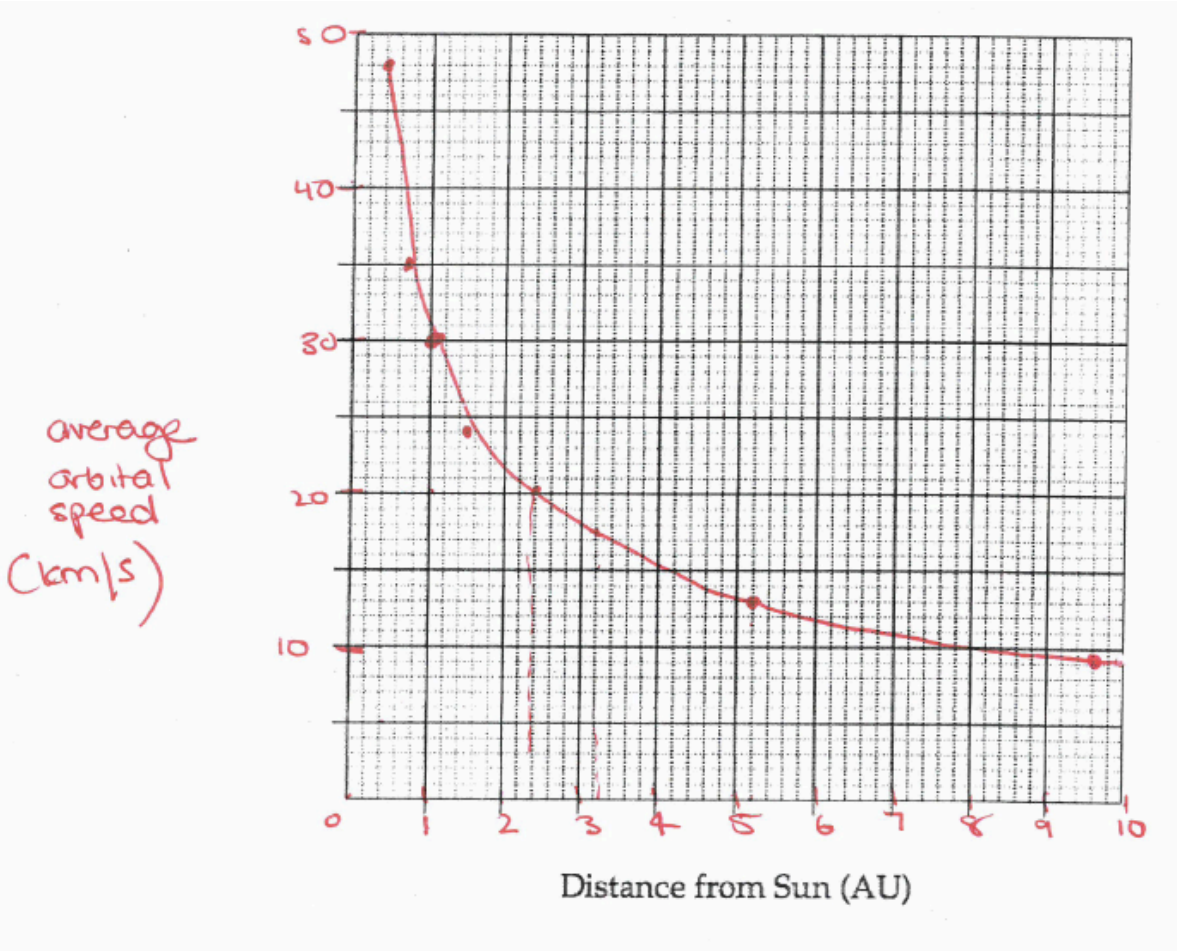
**Activity 1** (7 marks)

(a) Table 1: Average orbital speed of planets at different distances from the Sun




(b) Vesta 20 km/s and Hygeia 17.5 km/s

Range = 20 – 17.5
= 2.5 km/s

**Activity 2** (8 marks)
1 D
2 D
3. All variables **except** the distance the toy car travels can influence the results
4a. Scientists use **tables** to organise data
4b. They use graphs to **present information** so that trends and comparisons are more easily made
5 D
6 C
7 C

**Activity 3** (8 marks)
1. Metre ruler
2. Same tennis ball, same environmental conditions (i.e. no wind)
3. X = 150 cm , Y = 95 cm
4. Height of bounce = 130 cm. (NB: This should be marked on your graph)
5. **Average** heights are provided in the table

6. (1) Tennis balls bounce higher on concrete floors than on wooden floors.
(2) There is a maximum bounce height for each surface. This means that further increases will not result in a higher bounce height.

**Activity 4** (7 marks)

1. Fill two identical large pots with the same amount and type of soil
2. Place three strawberry seedlings of approximately 10 cm in height into each of the pots.
3. Place one pot in a greenhouse set at 10°C and the second in a greenhouse set at 20°C. Ensure that both pots receive the same amount of sunlight.
4. Water each plant with 50 mL water each morning.
5. Measure the height of each seedling using a metre ruler each morning and record the results in an appropriate table. Calculate the average height for the three plants in each pot.
6. Repeat steps 7 and 8 for another 20 days.