

Level 1-2 Level 3-4 Level 5-6

- a. State the definitions of "oxidation" and "reduction".
- b. State the equation that relates S_f , S_o , V_o , t and a .
- c. Sketch a $v-t$ graph (t on x-axis) that shows acceleration.
- d. Sketch a $v-t$ graph that show an acceleration, constant velocity and then a deceleration.
- e. A ball is dropped from a height of 8 m. At what velocity will it hit the ground?

- f. State the acceleration due to gravity.
- g. Which is faster: 144 km/h or 20 m/s
- h. State the equation for "period" (T).
- i. What do ϕ and ω represent? And the units?

- j. State the oxidation numbers of:



- k. What mass of Al is collected when electrolysis is carried out with AlBr_3 for 1 hour with a current of 10 A. Data: $F = 96500 \text{ C/mol}$
 $\text{Al}: 27 \text{ g/mol}$

- l. Describe the movement shown in the following graph:

