Mark schemes

1. (a)   7

1

Do not *accept −7 or 7−*

(b)   −2

1

Do not *accept 2−*

[2]

2. Gives a correct interpretation of the graph, eg:

- It is a straight line

- It goes up steadily

- The angle of the line stays the same

- The gradient of the line is constant

> *Accept minimally acceptable explanation, eg:*
> - *It is straight*
> - *It doesn't bend*
> - *It is a diagonal*
>
> ***Do not accept*** *incomplete or ambiguous explanations that do not sufficiently imply a constant speed and /*
> *or do not demonstrate the relationship holds for the*
> *entire graph, eg:*
> - *The line goes straight up*
> - *It is not wobbly*
> - *It is level*
> - *Every 5 mins he walks the same distance*
> - *He walks 1km in the first 15 mins and 1km in the second 15 mins*
>
> *!   Values read from graph*
> *Accept, provided it is clear the relationship holds for the entire*
> *graph.*
> *Values should be accurate within +/− 0.1km and /*
> *or +/− 2 minutes, eg:*
> - *0.7km every 10 minutes*
> - *Every 7.5 minutes he walks about half a km*
>
> *!   Calculation of kilometres per hour*
> *Accept values in the range 3.7 to 4.3km per hour inclusive.*

1

(b)   08:10

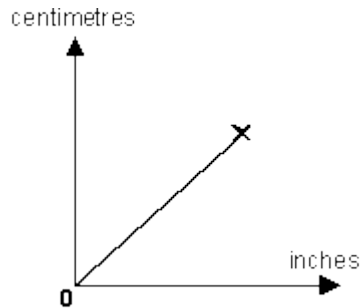> !   Accept values between 08:09 and 08:11 inclusive
> !   *Time*

1

[2]

3.   (a)   Straight line drawn on the graph from the origin to the given point or beyond.

> *The line drawn must be straight **AND** connect the given point with the origin.*
> *Accept a straight line which misses the given point and/or the origin by up to 1 mm.*

1

(b)   Answer in the range of 65 to 67 inclusive **OR** answer consistent with the line drawn on graph in *2a*.

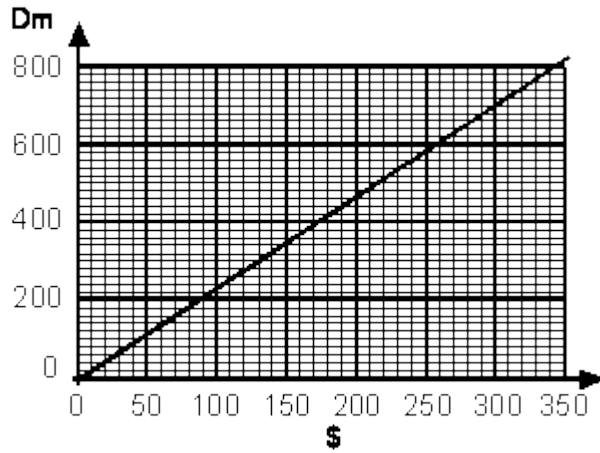> *Accept answers apparently based upon calculation, provided the answer lies within the given range.*

1

[2]

4.   (a)   Number of DM in the range 630 to 670, **inclusive.**

1

(b)   Number of $ in the range 270 to 280, **inclusive**.

1

(c)   Correct drawing of line **through origin** and point plotted according to answers given in (a) and (b), eg:

*To be awarded the mark, the point must be correctly plotted (within range described below) **AND** the line must pass through both the origin and the point. The point must be plotted within ± 20DM and ± $10 of the answers given in (a) and (b)*

1

[3]