M1.

(a) 0.6 or $\frac{3}{5}$

oe fraction

Accept 36 m/s per min

B1

m/s²

oe

Accept m/s per min only if their acceleration is 36 m/s per min

B1

(b) Chord from (0, 0) to (50, 30)
and
attempt at tangent to curve that is parallel to chord

M1

[11, 14]

Must see working on the graph

A1

[4]

M2.

(a) C

B1

(b) Draws tangent at $t = 3$

M1

(c) [3.6, 4.4]

SC1 correct gradient for their tangent

A1

[3]

M3.

(a) Attempts to calculate an area

eg $\frac{1}{2}$ × 90 × 9.4

Attempts to calculate average speeds over
***equal** time intervals **and** divides by number of intervals (**and** multiplies by 120)*

M1

[545, 565]

A1 [530, 580]

A2

m(etres)

Allow correct conversion to other units if supported by an area
eg 0.564 km after 564 calculated for area

B1

(b) Tangent drawn at 70 seconds

B1

Attempt at $\frac{y_2 - y_1}{x_2 - x_1}$ for their tangent

At least one of numerator or denominator correct

M1

[0.06, 0.14]

A1

[7]