

- 1 Mr Chan flies from London to Los Angeles, a distance of 8800 km.
The flight takes 11 hours and 10 minutes.

- (a) (i) His plane leaves London at 0935 local time.
The local time in Los Angeles is 8 hours behind the time in London.

Calculate the local time when the plane arrives in Los Angeles.

$$\begin{array}{r} 09.35 \\ 11.10 + \\ \hline 20.45 \end{array}$$

$$\begin{array}{r} 20.45 \\ 8.00 - \\ \hline 12.45 \end{array}$$

12.45 [2]

- (ii) Work out the average speed of the plane in km/h.

$$\begin{aligned} \text{Time} &= 11 \text{ h } 10 \text{ min} \\ &= 11 \frac{10}{60} \text{ h} \\ &= 11 \frac{1}{6} \text{ h} \\ &= \frac{67}{6} \text{ h} \end{aligned}$$

$$\begin{aligned} \text{Speed} &= \frac{\text{Distance}}{\text{Time}} \\ &= \frac{8800 \text{ km}}{67\frac{1}{6} \text{ h}} \\ &= 788.0597... \text{ km/h} \\ &\approx 788 \text{ km/h} \end{aligned}$$

788 km/h [2]

- (b) There are three types of tickets, economy, business and first class.
The price of these tickets is in the ratio economy : business : first class = 2 : 5 : 9.

- (i) The price of a business ticket is \$2350.

Calculate the price of a first class ticket.

$$\frac{9}{5} \times \$2350 = \$4230$$

\$4230 [2]

- (ii) Work out the price of an economy ticket as a percentage of the price of a first class ticket.

$$\begin{aligned} \frac{2}{9} \times 100\% &= 22.2222... \% \\ &\approx 22.2 \% \end{aligned}$$

22.2 % [1]

- (c) The price of a business ticket for the same journey with another airline is \$2240.

- (i) The price of a first class ticket is 70% more than a business ticket.

Calculate the price of this first class ticket.

$$\frac{70}{100} \times \$2240 = \$1568$$

$$\$2240 + \$1568 = \$3808$$

\$3808 [2]