IG Math Extended

Eri : Stone

Error Interval

1.

The distance between two towns is 600 km, correct to the nearest 10 km.
A car takes 8 hours 40 minutes, correct to the nearest 10 minutes, to travel this distance.

Calculate the lower bound for the average speed of the car in km/h.

$S_{av} = \frac{\text{distance}}{\text{time taken}}$ ↓ / ↑

~~605~~ ≤95 km

Lower ~~Higher~~ bound of distance : ~~604.9~~ km

Higer ~~Lower~~ bound of time taken : 8 hours ~~35~~ 45 mins

$S = \frac{\text{~~604.9~~ 595 km}}{\text{~~103/12~~ 8.75 h}} = \frac{\text{~~7260/8~~}}{103}$ km/h

2.

Neha has a piece of ribbon of length 23 cm, correct to the nearest cm.
From this ribbon she cuts off a piece with length 87 mm, correct to the nearest mm.

Work out the lower bound and the upper bound for the length of the remaining ribbon.
Give your answer in centimetres.

$86.5_{mm} \leq$ Cutting ribbon < 87.5 mm

$22.5_{cm} \leq$ Original ribbon < 23.5 cm

Upper bound = $23.5_{cm} - 87.5$mm 86.5_{mm}

= ~~15cm~~ 14.85 cm

lower bound = $22.5_{cm} - 87.5_{mm}$

= 13.75 cm