Calculations with Upper and Lower Bounds

1) A rectangular field is measured as 340m long (to the nearest 10 metres), and 85m wide (to the nearest metre). Find:
(a) the upper bound of the perimeter of the field
(b) the lower bound of the perimeter of the field
(c) the upper bound of the area of the field
(d) the lower bound of the area of the field

2) A car travels at 3.4 m/s (to 1dp) for 20 seconds (to the nearest second). Find:
(a) the upper bound of the distance travelled
(b) the lower bound of the distance travelled

3) Two cats are weighed; one weighs 5.4kg and the other 3.9kg (both to 1 decimal place).
(a) Find the upper bound of the difference in mass.
(b) Find the lower bound of the difference in mass.

4) The speed of an object in an experiment is to be calculated using the formula $S = \frac{D}{T}$. D has been measured as 24cm (to the nearest cm), and T as 1.6 secs (to 1dp).
(a) Calculate the upper bound of the speed.
(b) Calculate the lower bound of the speed.

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