

**Q. I) Solve the following.**

- 1) The quantities  $x$  and  $y$  are given to 1 s.f as  $x=20$  and  $y=40$ . Find the minimum(LB) and maximum(UB) possible value of each expression below.

a)  $x+y$

b)  $y-x$

c)  $xy$

d)  $x/y$

e)  $y/x$

- 2) A student runs 100 m in 12.8 seconds. Find the possible speeds of the student if :

- a) The distance is to the nearest metre and the time is to the nearest 0.1 s.

b) The distance is to the nearest cm and the time is to the nearest 0.1s

3) Tatiana goes for a walk.

a) She walks for 15 minutes at a speed of 80 meters per minute. Calculate the distance she walks.

b) She then walks for a further  $p$  minutes at  $w$  meters per minute. Write down an expression, in terms of  $p$  and  $w$ , for the total distance Tatiana walks

c) Write down an expression, in terms of  $p$  and  $w$ , for Tatiana's average speed, in meters per Minute.

4) The distance between Geneva and Gstaad is 150 km.

a) A car took 1.5 hours to travel from Geneva to Gstaad. Calculate the average speed of the car.

b) A bus left Gstaad at 10. 15 It arrived in Geneva at 12 30. Calculate the time, in hours and minutes that the bus took for the journey.

c) Another bus left Geneva at 13 55. It travelled at an average speed of 60 km/h. Find the time it arrived in Gstaad.

d) The distance of 150 km is correct to the nearest 10 km. Complete the statement for the distance,  $d$  km, from Geneva to Gstaad.

\_\_\_\_\_  $\leq d <$  \_\_\_\_\_

5) The population,  $P$ , of Brunei in 2008 was 400 000 correct to the nearest 1000. Complete the statement about the value of  $P$ .

\_\_\_\_\_  $\leq P <$  \_\_\_\_\_

6) The radius of a circle is 12 mm to the nearest mm. Find the range of possible values for the  
a) The radius

b) Diameter

c) Circumference

d) Area

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