

1) If $\log 0.317=0.3332$ and $\log 0.318=0.3364$ then find $\log 0.319$?

Sol) $\log 0.317=0.3332$ and $\log 0.318=0.3364$, then

$\log 0.319=\log 0.318+(\log 0.318-\log 0.317) = 0.3396$

2) A box of 150 packets consists of 1kg packets and 2kg packets. Total weight of box is 264kg. How many 2kg packets are there ?

Sol) $x = 2$ kg Packs

$y = 1$ kg packs

$x + y = 150$ Eqn 1

$2x + y = 264$ Eqn 2

Solve the Simultaneous equation; $x = 114$

so, $y = 36$

ANS : Number of 2 kg Packs = 114.

3) My flight takes off at 2am from a place at 18°N 10°E and landed 10 Hrs later at a place with coordinates 36°N 70°W. What is the local time when my plane landed?

6:00 am b) 6:40am c) 7:40 d) 7:00 e) 8:00

Sol) The destination place is 80 degree west to the starting place. Hence the time difference between these two places is 5 hour 20 min. ($=24\text{hr} \times 80/360$).

When the flight landed, the time at the starting place is 12 noon (2 AM + 10 hours).

Hence, the time at the destination place is 12 noon - 5:20 hours = 6: 40 AM

4) A plane moves from 9°N 40°E to 9°N 40°W. If the plane starts at 10 am and takes 8 hours to reach the destination, find the local arrival time ?

Sol) Since it is moving from east to west longitude we need to add both

ie, $40+40=80$

multiply the ans by 4

$\Rightarrow 80 \times 4 = 320\text{min}$

convert this min to hours ie, 5hrs 33min

It takes 8hrs totally . So $8-5\text{hr } 30\text{ min} = 2\text{hr } 30\text{min}$

So the ans is 10am+2hr 30 min

\Rightarrow ans is 12:30 it will reach

5) The size of the bucket is N kb. The bucket fills at the rate of 0.1 kb per millisecond. A programmer sends a program to receiver. There it waits for 10 milliseconds. And response will be back to programmer in 20 milliseconds. How much time the program takes to get a response back to the programmer, after it is sent? Please tell me the answer with explanation. Very urgent.

Sol) see it doesn't matter that what the time is being taken to fill the bucket. after reaching program it waits there for 10ms and back to the programmer in 20 ms. then total time to get the response is $20\text{ms} + 10\text{ms} = 30\text{ms}$...it's so simple....

6) A file is transferred from one location to another in '\buckets\'. The size of the bucket is 10 kilobytes. Each bucket gets filled at the rate of 0.0001 kilobytes per millisecond. The transmission time from sender to receiver is 10 milliseconds per bucket. After the receipt of the bucket the receiver sends an acknowledgement that reaches sender in 100 milliseconds. Assuming no error during transmission, write a formula to calculate the time taken in seconds to successfully complete the transfer of a file of size N kilobytes.

$(n/1000) * (n/10) * 10 + (n/100)$as i hv calculated...~~!not 100% sure