

For hours hand

- For every 12 hours, hours hand rotate 360deg. so, for every h hour, hours hands rotate how many deg?

12 hours ---> 360deg

h hours ---> ?deg

$$= (360 * h) / 12$$

$$= (30 * h) \text{deg}$$

- Now, hours hand has movement due to minutes also. so, lets calculate hours hand movement after every m minute.
- For every 60 minutes, hours hand rotate 30deg. so, for every m minute, hours hands rotate how many deg?
60 minutes ---> 30deg
m minutes ---> ?deg
$$= (30 * m) / 60$$
$$= (m/2) \text{deg or } (0.5 * m) \text{deg}$$
- Now, hours hand has movement due to seconds also. so, lets calculate hours hand movement after every s seconds.
- For every 60 seconds, hours hand rotate 0.5deg. so, for every s seconds, hours hands rotate how many deg?
60 seconds ---> 0.5deg
s seconds ---> ?deg
$$= (0.5 * s) / 60 \text{ or } (0.00833 * s) \text{deg}$$

- So, in total hours hand movement after every second is following
$$= [(30 * h) + (0.5 * m) + (0.00833 * s)] \text{deg}$$

For minutes hand

- For every 60 minutes, minutes hand rotate 360deg. so, for every m minutes, minutes hands rotate how many deg?

60 minutes ---> 360deg

m minutes ---> ?deg

$$= (360*m)/60$$

$$= (6*m)\text{deg}$$

- Now, minutes hand has movement due to seconds also. so, lets calculate minutes hand movement after every s seconds.
- For every 60 seconds, minutes hand rotate 6deg. so, for every s seconds, minutes hands rotate how many deg?

60 seconds ---> 6deg

s seconds ---> ?deg

$$= (6*s)/60 \text{ or } (0.1*s)\text{deg}$$

- So, in total minutes hand movement after every second is following
$$= [(6*m) + (0.1*s)] \text{deg}$$

For seconds hand

- For every 60 seconds, seconds hand rotate 360deg. so, for every s seconds, seconds hands rotate how many deg?

60 seconds ---> 360deg

s seconds ---> ?deg

$$= (360*s)/60$$

$$= (6*s)\text{deg}$$

- So, in total seconds hand movement after every second is following
$$= (6*s) \text{deg}$$