Problem of the Week

Week Two

Solutions due by 5pm on Friday, February 5, 2016

Four individuals need to walk a dark path through the woods at night with only one flashlight between them. The four people traverse the path at 4 different rates: Person A takes 1 minute, Person B takes 3 minutes, Person C takes 6 minutes, and Person D takes 10 minutes. The path is big enough for two people to traverse it with the flashlight at the same time.

1) What is the fastest time they can all get through the woods, keeping in mind that if two people go together they travel at the slower rate and that the times above are one-way, not round trip times. Explain why this is the fastest and give a walking order that gives this time.

2) In what combination (if any) could the group traverse the path in exactly 36 minutes?

This problem is brought to you by Prof. Daniel Look.

Submit your solutions to Prof. Choong-Soo Lee. You may submit either a hard copy or an electronic copy via Dropbox on the POW website.


Good Luck!!