

# Mileage Claim Calculator Kata

## *About this Kata*

This Kata is about working out Penelope's mileage claim, she forgot to do her claim for the last few months and now needs help catching up.

## *Problem Description*

Have you ever been in Penelope's position, being so busy she'd forgotten to do her mileage claim? She now needs to complete her claim to top up her funds for a holiday. Penelope does 24 miles travel per work day. She also does somewhere between 3-6 miles per day in personal mileage to and from various sporting activities, grocery shops etc.. At weekends Penelope does random amounts of mileage between 20 and a maximum of 35 miles. Penelope's last recorded mileage was 56472 on 20/11, her mileage when starting to work this mess out was 58941 on 19/2.

Create a realistic mileage log, taking into account the above details, not exceeding the mileage on her odometer and taking into account her Christmas break between 24/12 and 7/1 where mileage was only 30 private miles as she mainly travelled with her partner in their car. Then calculate the number of miles and amount of Penelope's claim given that mileage payable at a rate £0.45/mile.

## **Clues**

Where mileage is not specified, a random amount appropriate to the range given should be substituted.

Only whole miles are recorded, traditional rounding should be employed (e.g. 0.5 rounds up)

Math objects are your friend in this Kata, in JavaScript code similar to:

`Math.floor(Math.random() * (max - min + 1)) + min;`<sup>1</sup> should help generate integers between two numbers. [PHP: `rand(min, max)`; Python: `random.randrange(min, max)` ]

If using JavaScript beware date handling nuances – months are zero based and go to 11.

The mileage log should show the date and the mileage range for each date, excluding personal mileage. e.g.:

20/11 56475 – 56499 (24 miles)

21/11 56501 – 56525 (2 miles personal mileage not recorded + 24 miles)

...

19/2 58917 – 58941 (final odometer reading as Penelope starts her claim form)

<sup>1</sup> [https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global\\_Objects/Math/random](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Math/random)