

Spicy Question #14



An old house needs the following jobs completed:



Calculator allowed

- New carpets
- New boiler
- Roof repairs

The owner hires 2 regular carpet fitters, 2 regular plumbers, 2 regular roofers and a “superworker”

The 2 carpet fitters work at the same speed and can fit the new carpets in 6 hours.
The 2 plumbers work at the same speed and can install the new boiler in 8 hours.
The 2 roofers work at the same speed and can repair the roof in 11 hours.

A super worker is capable of doing all of the jobs (but only one at a time!)
The superworker works:

- Twice as fast as a regular carpet fitter.
- At the same speed as a regular plumber.
- Three times as fast as a regular roofer.

All jobs can happen simultaneously and are started at 7 am.

The owner asks the superworker to support the carpet fitters first.

Once the carpets are complete the superworker supports the plumbers with the boiler.

Once the boiler is installed the superworker supports the roofers with the roof repairs.

The hourly cost of each worker is shown below:

Carpet fitter	£30/hour
Plumber	£50/hour
Roofer	£40/hour
Superworker	£100/hour

All workers require an unpaid 30 minute break after each 3 hours of work apart from the superworker, who requires no breaks at all.

Work out the total cost of completing all of the work.

SUBMISSION DEADLINE 23/1/23 – 7PM

Video
Solution



All submissions to be emailed to 1stclassmaths@gmail.com

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