



The Halliday brothers, Stan and Paul, have a New Year's Day tradition: each year they and their wives go hiking in the Snowdonia National Park.

This year was no different. However, towards the end of their walk they got lost on one of the mountains. It had become dark, and there was only one torch between the four people. The group approached a particularly narrow mountain pass, and read a sign that said:

GRAVELY GORGE

**WARNING: NO MORE THAN TWO PEOPLE MAY
CROSS THE GORGE TOGETHER.**

Stan decided that two people should cross the gorge together; then one should wait on the far side whilst the other brought back the torch. Some of the walkers were more confident than others in getting across the gorge. They each estimated how long they would need to get across:



Stan

It will only take me 2 minutes to cross the gorge. But I'm certainly not doing every trip.



Bev

I will need 5 minutes to get across. But I'm not going on my own – no way!



Paul

It's going to take me 8 minutes I'm afraid. By the way, I won't go first!



Tracy

It will take me 3 minutes to get across. Just don't send me across with Paul.

A heavy rainstorm was due in 20 minutes, a rainstorm that would make the gorge impossible to pass. All four members must get to the other side before the rain falls.

**Plan the order in which the four people should cross the gorge.
Can they all get across before the storm is due?**

Note: when two people cross the gorge, to be safe they must stay together. This means that they have to walk at the speed of the slowest person. For example, it would take 5 minutes for Tracy to cross with Bev.