

Logic Puzzle

How well does your form work together?

In your class work out the answer to the puzzle and your tutor will email me the answer. The form (in each year group) who gets the correct answer to me first is the winner. **You may only answer once and make sure you answer your year group question!**



Year 7



A man has 53 socks in his drawer:

21 identical blue, 15 identical black and 17 identical red.

The lights are out and he is completely in the dark.

How many socks must he take out to make certain he has at least one pair of black socks?





Year 8

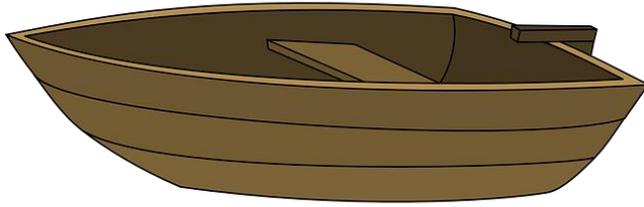


Jack is looking at Anne. Anne is looking at George.
Jack is married, George is not, and we don't know if Anne is married.

Is a married person looking at an unmarried person?

Bonus point for naming Jack,
Anne and George (no rush
for that answer)





Year 9



A farmer wants to cross a river and take with him a wolf, a goat and a cabbage.

He has a boat, but it can only fit himself plus either the wolf, the goat or the cabbage.

If the wolf and the goat are alone on one shore, the wolf will eat the goat.

If the goat and the cabbage are alone on the shore, the goat will eat the cabbage.

How can the farmer bring the wolf, the goat and the cabbage across the river without anything being eaten?



Year 10

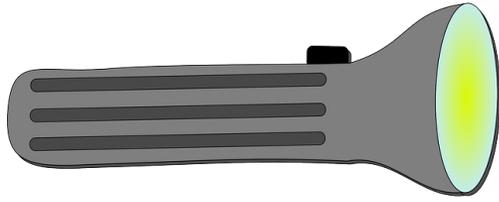
The “burning rope” problem.

You have two ropes that each take an hour to burn, but burn at inconsistent rates.

How can you measure 45 minutes?

(You can light one or both ropes at one or both ends at the same time.)





Year 11

This famous river crossing problem is known as the “bridge and torch” puzzle.

Four people are crossing a bridge at night, so they all need a torch—but they just have one that only lasts 15 minutes.

Alice can cross in one minute, Ben in two minutes, Cindy in five minutes and Don in eight minutes.

No more than two people can cross at a time; and when two cross, they have to go at the slower person’s pace. How do they get across in 15 minutes?

