

# Mr Roberts' Maths Challenge

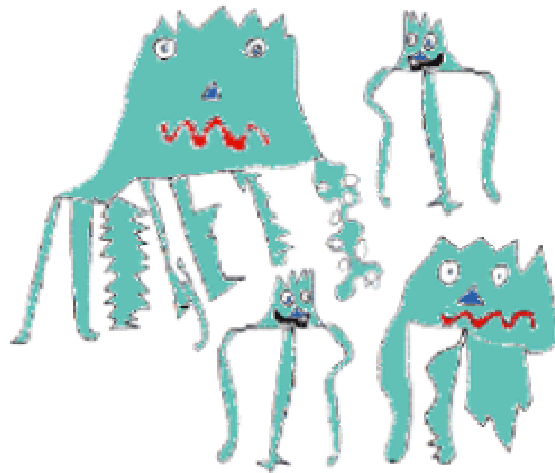
Welcome to our second Mr Roberts' Maths Challenge of 2018. Thank you for the continued positive response to January's challenge. We will be looking at these problems in class this week, discussing how best to solve them. In total we received 27 completed challenges from children, all of whom will be receiving a golden raffle ticket. The puzzles offer three different levels of challenge: 'Spiders and Flies' is aimed primarily at YR-Y2, Zios and Zepts (Y2-Y4) and Andy's Marbles (Y4-Y6), however it is completely up to you which problem you choose to solve. All correct entries will receive a golden raffle ticket and there will again be an end-of-year prize draw to win a tablet computer. Completed challenges are to be given to your class teacher. Good luck!

## Spiders and Flies

There were 22 legs creeping across the web. How many flies? How many spiders?

## Zios and Zepts

On the planet Vuv there are two sorts of creatures. The Zios have 3 legs and the Zepts have 7 legs.



The great planetary explorer Nico, who first discovered the planet, saw a crowd of Zios and Zepts. He managed to see that there was more than one of each kind of creature before they saw him. Suddenly they all rolled over onto their backs and put their legs in the air.

He counted 52 legs. How many Zios and how many Zepts were there?  
Do you think there are any different answers to this that would work?



## Andy's Marbles

Andy and his friend Sam were walking along the road together. Andy had a big bag of marbles.



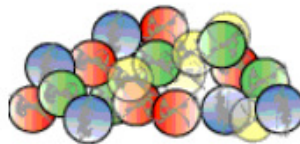
Unfortunately the bottom of the bag split and all the marbles spilled out. Poor Andy!



One third of the marbles rolled down the slope too quickly for Andy to pick them up. One sixth of all the marbles disappeared into the rain-water drain.

Andy and Sam picked up all they could but half of the marbles that remained nearby were picked up by other children who ran off with them.

Andy counted all the marbles he and Sam had rescued.



He gave one third of these to Sam for helping him pick them up. Andy put his remaining marbles into his pocket. There were 14 of them.

How many marbles were there in Andy's bag before the bottom split?

What fraction of the total number that had been in the bag had he lost or given away?