

Primary Problem Puzzle - Solutions

Multiple facts

The children play a game in class where they pick a number card up to 100, and write down all the numbers of which it is a multiple (not including 1 and the number itself)

1. Sam chooses a number card and writes down 2, 3, 4, 6. What number has Sam chosen? **12**
2. Which numbers up to 50 are multiples of 2, 3, 4 and 6? **12, 24, 36, 48**
3. Sam says there are no numbers less than 100 that are multiples of 2, 3, 4, 5 and 6. Is Sam correct? **No, 60.**
4. Sam's friend Andy has a number. He starts writing down numbers which have his number as a multiple. So far he has written 2, 4, 5. Which numbers up to 100 could it be? **20, 40, 60, 80, 100**
5. Andy then writes 8, 10, 20. Now which numbers could it be? **40, 80**
6. Andy says all the numbers which are multiples of 8 and also multiples of 4. Is Andy correct? Explain your answer? **Yes because multiples of 8 are double multiples of 4**

Problem taken from Problem-solving Toolkit Years 5 and 6 (Maths plus from Heinemann)