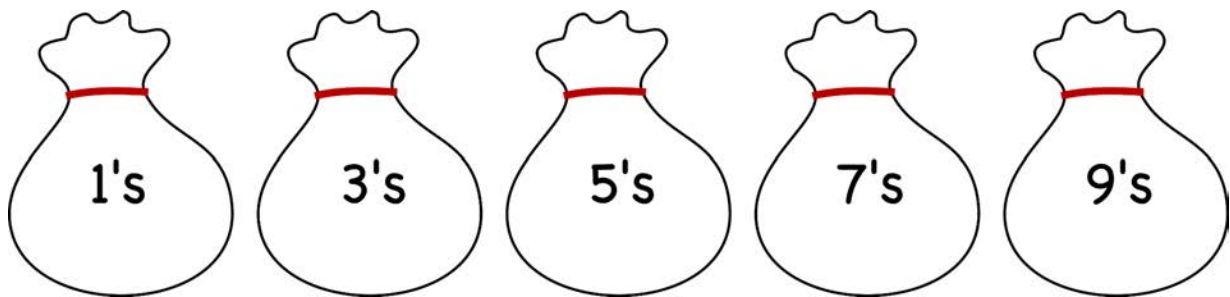


Puzzle of the Week

Adding Ten Numbers

THE CHALLENGE: You have five big bags of coins. Each bag has only one kind of coin. The bags have coins worth 1, 3, 5, 7, and 9. If you can, find ten coins that add up to 43. If you can't, describe why it is impossible.



EXPLORATION: What are all the possible numbers you can make with ten coins from these bags?

Puzzle of the Week

Adding Ten Numbers – Notes

THE CHALLENGE: This is impossible. All the numbers to choose from are odd. Odd numbers added together an even number (ten) times will always produce an even number, no matter which odd numbers are chosen.

EXPLORATION: Every even number from 10 to 90 can be produced. Start with $10 = 10 \times 1$. To produce all the even numbers up to 90, replace one number each time with a number that is two larger than it.