

Y4 NRICH Money Challenges

Adding and subtracting money £ and p

Money Bags

Ram divided 15 pennies among four small bags.

He labelled each bag with the number of pennies inside it.

He could then pay any sum of money from 1p to 15p without opening any bag.

How many pennies did Ram put in each bag?



Adding and subtracting money £ and p

How Much Did it Cost?

Dan bought a packet of crisps and an ice cream.

The cost of both of them together is in one of the boxes below.

£1.85	75p	£1.74	£2.25	£1	£1.56
£2.10	80p	£1.80	£3.06	£1.44	£1.50
£1.60	£1.25	£1.20	90p	£1.45	£1.27

Use these clues to find out how much he paid:

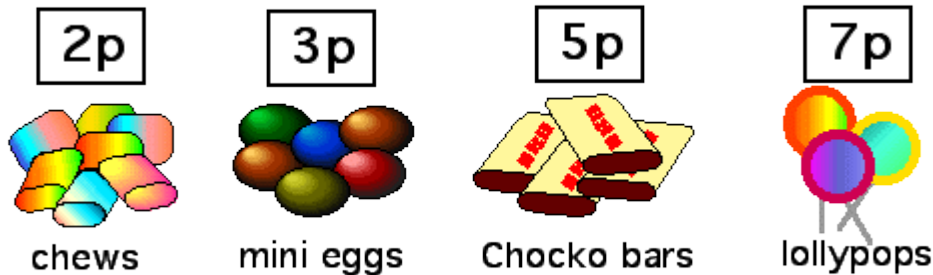
1. You need more than three coins to make this amount.
2. There would be change when using the most valuable coin to buy them.
3. The crisps cost more than 50p.
4. You could pay without using any copper coins.
5. The ice cream costs exactly twice as much as the crisps.

Adding and subtracting money £ and p

The Puzzling Sweet Shop

Rosie went into the sweet shop with 10p to spend.

There were chews for 2p, mini eggs for 3p, Chocko bars for 5p and lollypops for 7p.



What could she buy if she wanted to spend all her money?

Alice, James, Katie and Henry went into the shop too. They each had 20p to spend and they all spent all of their money.

Alice bought at least one of each kind of sweet. Which one did she have two of?

James spent his money on just one kind of sweet, but he does not like chews. Which sweets did he buy?

Katie bought the same number of sweets as James but she had 3 different kinds. Which sweets did she buy?

Henry chose 8 sweets. What could he have bought?

Four operations money £ and p

Plenty of Pens



Amy went into her local stationery shop. Her mum had given her £2.50 to spend.

Amy liked the look of some luminous pens, which cost 15p each, and some fancy pencils, which cost 10p each.

She bought four times as many pens as pencils and was given 40p change.

How many of each did she buy?

Four operations money £ and p

Charitable Pennies

Every year 15 schools take part in a charity fund raiser. Children from the schools donate pennies which are then collected up and sent to the charity. Mo works for the charity and receives the donations from the schools.

Challenge 1

In 2018 the charity received a total of £1440. Mo noticed that their records show that 15 payments were made (1 from each school), payments were received on 8 different dates, and the same total amount was received on each of those 8 dates.

Find two different ways that this could have happened.

Challenge 2

In 2019 the charity again received exactly £1440, Mo noticed that if the 15 payments were arranged in order from smallest to largest, the amounts went up in equal steps.

Find three different ways that this could have happened.

Challenge 3

Mo wondered if in 2020 the patterns they had noticed in 2018 and 2019 could both occur at the same time. In other words that the total received on each of the 8 dates are equal, the 15 different payments go up in equal steps and the total amount received is £1440 again.

In how many ways can this be done? How do you know?

Adding money

Chocholics



George and Jim want to buy a chocolate bar.

George needs 2p more and Jim needs 50p more to buy it.

When they put their money together, it is still not enough to pay for the chocolate bar.

How much is the chocolate bar?