

Discussion Problems

Step 1: Pounds and Pence

National Curriculum Objectives:

Mathematics Year 3: (3M9a) [Add and subtract amounts of money to give change, using both £ and p in practical contexts](#)

About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 3 Money](#) resources.

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Pounds and Pence

1. Below is a price list for the items on sale in the pet shop.

Sam and Jane only buy two items each.



I use no more than 20 coins to buy rabbit food and a hamster cage.



I only use 17 coins to buy hamster bedding and dog biscuits.

| | |
|-----------------|------------|
| Rabbit food | £4 and 19p |
| Fish food | £3 and 29p |
| Dog bed | £7 and 82p |
| Hamster bedding | £1 and 75p |
| Cat collar | £5 and 37p |
| Hamster cage | £6 and 38p |
| Dog biscuits | £4 and 90p |

Investigate which coins they use to buy each of their items.

Investigate which items from the pricelist could be paid for using the same number of coins.

DP

2. Investigate the possible combinations of notes and coins each child could have, using the clues given.



I have 8 coins in total and 3 notes. I have more silver coins than bronze coins, and more than £2 in pound coins

I have the least amount of money but I have more than £8. I have double the number of Jacob's coins, but no notes.



I have between £6 and £12. I only have one note, double the amount of silver coins as Yosef and three other coins.

I have four silver coins but no bronze coins. I have between eight and ten coins altogether and two notes.



DP

Pounds and Pence

1. Below is a price list for the items on sale in the pet shop.

Sam and Jane only buy two items each.



I use no more than 20 coins to buy rabbit food and a hamster cage.

Sam



I only use 17 coins to buy hamster bedding and dog biscuits.

Jane

| | |
|-----------------|------------|
| Rabbit food | £4 and 19p |
| Fish food | £3 and 29p |
| Dog bed | £7 and 82p |
| Hamster bedding | £1 and 75p |
| Cat collar | £5 and 37p |
| Hamster cage | £6 and 38p |
| Dog biscuits | £4 and 90p |

Investigate which coins they use to buy each of their items. **Various answers, for example: Sam could use five £1 coins, two 50p coins, three 10p coins and four 2p coins to buy the hamster cage and two £2 coins, one 10p coin, one 5p coin and two 2p coins to buy the rabbit food.**

Jane could use one 50p coin, five 20p coins, two 10p coins and one 5p coin to buy the hamster bedding and four £1 coins, one 50p, one 20p and two 10p coins to buy the dog biscuits.

Investigate which items from the pricelist could be paid for using the same number of coins. **Various answers, for example: Fish food, a dog bed and a cat collar could all be bought using nine coins.**

DP

2. Investigate the possible combinations of notes and coins each child could have, using the clues given.



I have 8 coins in total and 3 notes. I have more silver coins than bronze coins, and more than £2 in pound coins

Anya

I have the least amount of money but I have more than £8. I have double the number of Jacob's coins, but no notes.



Eliza

Various answers, for example: Anya has £18 and 73p – three £5 notes, one £2 coin and one £1 coin, three 20p coins, one 10p coin, one 2p coin and one 1p coin.

Eliza has £8 and 22p – two £1 coins, ten 50p coins, four 20p coins, four 10p coins and two 1p coins.



I have between £6 and £12. I only have one note, double the amount of silver coins as Yosef and three other coins.

Jacob

I have four silver coins but no bronze coins. I have between eight and ten coins altogether and two notes.



Yosef

Jacob has £8 and 23p – one £5 note, one £2 coin, four 20p coins, four 10p coins, one 2p coins and one 1p coin.

Yosef has £14 and 40p – two £5 notes, four £1 coins, four 10p coins.

DP