



Solving Problems with Coins

I can solve problems involving money, length and mass.



Coin	Diameter	Mass
£2	28.4mm	12g
£1	23.4mm	8.8g
50p	27.3mm	8g
20p	21.4mm	5g
10p	24.5mm	6.5g
5p	18mm	3.3g
2p	25.9mm	7.1g
1p	20.3mm	3.6g

1. Which weighs more?



2. Which weighs less?



3. If you lined up some coins in a row, which set of coins would make a longer line: two 20ps or a 2p and a 1p?

4. Joe has a line of three 5ps. Hamish has a line of two 1ps. Whose line of coins is longer?

5. The shopkeeper is weighing some coins she has collected. She has a dirty old 50p and 1p, and a shiny new 10p and 2p. She thinks that her shiny new coins will weigh more than the dirty old coins. Is she right or wrong?

6. Sidra and Katy have a competition to see who can make the longest snake with their coins. Sidra has two 10ps and a 2p and Katy has three £1 coins. Who can make the longest snake on the ground with their coins?



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1. Which weighs more?



2. Which weighs less?



3. If you lined up some coins in a row, which set of coins would make a longer line: two 50p coins or a £2 coin and a £1 coin?

4. Fiona found three 2p coins in the pocket of her old coat, while Erin found a £1 coin and a £2 coin by looking down the back of the sofa! They both put their money in a bag to give to charity. Whose money bag weighed more, Erin's or Fiona's?

5. Jim is counting his pocket money. He has two £2 coins and a 50p piece. Jim thinks that they would measure more than 85mm altogether if he lined them up. Is he right or wrong?

6. I have three coins in my pocket that add up to 20p. (I do not have a 20p piece.) Which three coins do I have? How much do they weigh altogether?

Solving Problems with Coins Answers

- ★ 1. *Two 5ps weigh more.*
- 2. *Sp and 1p weigh more.*
- 3. *Two 20ps would make a longer line.*
- 4. *Joe's line of three 5ps is longer.*
- 5. *She is right – the old coins weigh 11.6g, but the new coins weigh 13.6g.*
- 6. *Sidra's snake is the longest – it is 74.9mm. Katy's snake is only 70.2mm.*

- ★ ★ 1. *Two 1ps weigh more.*
- 2. *Three 5ps weigh less.*
- 3. *Two 50ps would make a longer line.*
- 4. *Fiona's money bag weighed more.*
- 5. *Jim is wrong – the coins would measure 84.1mm altogether if he lined them up.*
- 6. *The only possible combination of three coins that add up to 20p are one 10p and two 5ps. The combined weight of these coins is 13.1g.*

- ★ ★ ★ 1. *50p, 2p and 1p.*
- 2. *Two 2ps and a 1p.*
- 3. *50p and 5p.*
- 4.
 - a. *Ten coins – all 5ps.*
 - b. *Three coins – two £2 coins and a £1 coin.*
 - c. *£5 – made up of two £2 coins and a £1.*
 - d. *9p – made up of four 2p coins and one 1p coin.*
 - e. *Accept all other answers that have a total weight of between 30g and 35g.*