

# Reasoning and Problem Solving

## Step 4: Subtracting Money

### National Curriculum Objectives:

Mathematics Year 3: (3C1) [Add and subtract numbers mentally, including three-digit number and ones](#)

### Differentiation:

Questions 1, 4 and 7 (Reasoning)

**Developing** Find the difference between two amounts and explain the method used. Subtractions do not involve any exchanges. Pictorial support and scaffolding provided.

**Expected** Find the difference between two amounts and explain the method used. Subtractions involve some exchanges.

**Greater Depth** Find the difference between two amounts and explain the method used. Subtractions involve exchanges and conversions between £ and p.

Questions 2, 5 and 8 (Reasoning)

**Developing** Find and explain the error in a subtraction which does not involve any exchanges. Pictorial support provided.

**Expected** Find and explain the error in a subtraction which involves some exchanges.

**Greater Depth** Find and explain the error in a subtraction which involves exchanges and conversions between £ and p.

Questions 3, 6 and 9 (Problem Solving)

**Developing** Complete the missing numbers in a subtraction which does not involve any exchanges. Pictorial support provided.

**Expected** Complete the missing numbers in a subtraction which involves some exchanges.

**Greater Depth** Complete the missing numbers in a subtraction which involves exchanges and conversions between £ and p.

More [Year 3 Money](#) resources.

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# Subtracting Money

# Subtracting Money

1a. Emma and Tom have saved some money.

Emma's money



Tom's money



$$£6 \text{ and } 80\text{p} - £4 \text{ and } 30\text{p} = £ \text{ \_\_\_ } \text{ and } \text{ \_\_\_ } \text{p}$$

How much more money does Emma have than Tom? Explain how you know.



R

1b. Kim and Dan have saved some money.

Dan's money



Kim's money



$$£8 \text{ and } 70\text{p} - £3 \text{ and } 40\text{p} = £ \text{ \_\_\_ } \text{ and } \text{ \_\_\_ } \text{p}$$

How much more money does Kim have than Dan? Explain how you know.

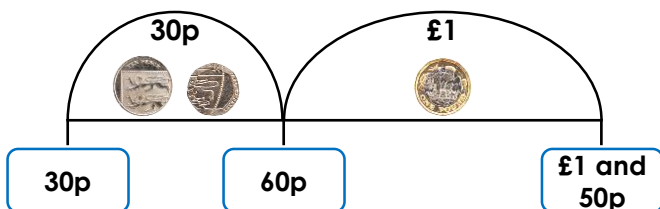


R

2a. Gracie says,



I have £1 and 50p and I spend £1 and 30p on a drink. This means I will have 30p left.



Explain the mistake Gracie has made.

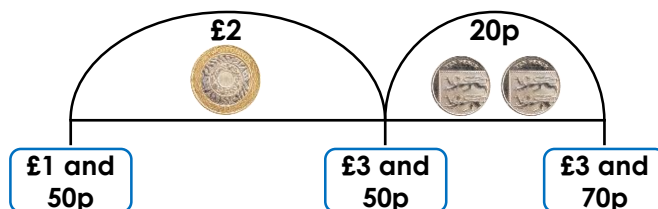


R

2b. Harold says,



I have £3 and 70p and I spend £2 and 30p on a book. This means I will have £1 and 50p left.



Explain the mistake Harold has made.



R

3a. Find possible values of the hidden digits. Complete the subtraction, without exchanges, using all of the cards below.



$$£ \square \text{ and } \square \text{0p} - £ \square \text{ and } \square \text{0p} = £5 \text{ and } 30\text{p}$$



PS

3b. Find possible values of the hidden digits. Complete the subtraction, without exchanges, using all of the cards below.



$$£ \square \text{ and } \square \text{0p} - £ \square \text{ and } \square \text{0p} = £3 \text{ and } 40\text{p}$$



PS

# Subtracting Money

# Subtracting Money

4a. Holly and Matt have saved some money.



Holly

I have £3 and 70p.



Matt

I have £8 and 55p.

How much more money does Matt have than Holly? Explain how you know.



R

4b. Kate and Sam have saved some money.



Kate

I have £6 and 95p.



Sam

I have £5 and 55p.

How much more money does Kate have than Sam? Explain how you know.

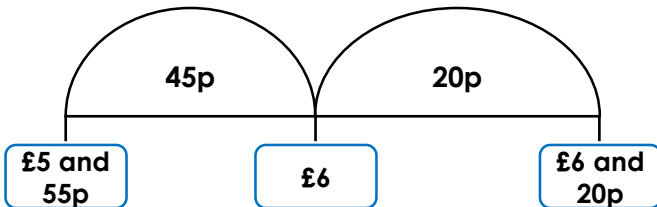


R

5a. Harry says,



I have £6 and 20p and I spend 55p on sweets. This means I will have £5 and 55p left.



Explain the mistake that Harry has made.

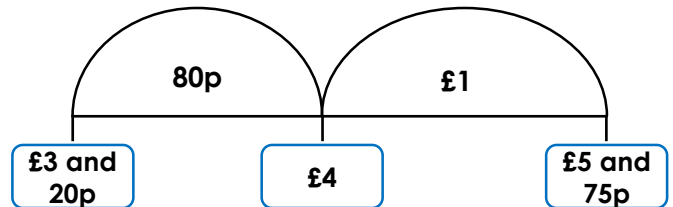


R

5b. Pam says,



I have £5 and 75p and I spend £1 and 80p on a sandwich. This means I will have £3 and 20p left.



Explain the mistake that Pam has made.



R

6a. Find possible values of the hidden digits. Complete the subtraction using 4 of the cards below. Find 2 possible solutions.



$$£ \square \text{ and } \square 5\text{p} - £ \square \text{ and } \square 0\text{p} = £3 \text{ and } 45\text{p}$$



PS

6b. Find possible values of the hidden digits. Complete the subtraction using 4 of the cards below. Find 2 possible solutions.



$$£ \square \text{ and } \square 5\text{p} - £ \square \text{ and } \square 0\text{p} = £4 \text{ and } 25\text{p}$$



PS

# Subtracting Money

7a. Jamie and Sarah have saved some money.



Jamie

I have nine 1p coins, two 20p coins, three £5 notes and one £2 coin.



Sarah

I have six hundred and ninety-nine pence.

How much more money does Jamie have than Sarah? Explain how you know.



R

# Subtracting Money

7b. Sue and Josh have saved some money.



Sue

I have eight £1 coins, nine 10p coins, one 5p coin, and one £10 note.



Josh

I have nine hundred and forty-eight pence.

How much more money does Sue have than Josh? Explain how you know.



R

8a. Trixie says,



I have £15 and 64p and I spend 793p on a new headband. This means I will have £7 and 43p left.

two £2 coins  
seven 1p coins  
one 50p coin

six 10p coins  
three £1 coins  
three 1p coins

£7 and  
43p

£12

£15 and  
64p

Explain the mistake that Trixie has made.



R

8b. Dane says,



I have £17 and 31p and I spend 895p on a sports magazine. This means I will have £8 and 16p left.

one £1 coin  
four 20p coins  
two 2p coins

one 10p coin  
seven £1 coins  
three 1p coins

£8 and  
16p

£10

£17 and  
31p

Explain the mistake that Dane has made.



R

9a. Complete the subtraction using the cards below so that the answer is greater than 450p but less than £6 and 25p.

2



1



5



£   and  
3  p

£7 and  
  p

=   6 p



PS

9b. Complete the subtraction using the cards below so that the answer is greater than 634p but less than £8 and 42p.



5

4

3



£   and  
 8 p

£6 and  
  p

=  9  p



PS

## Reasoning and Problem Solving Subtracting Money

### Developing

- 1a. Emma has £2 and 50p more than Tom because £6 and 80p – £4 and 30p = £2 and 50p.
- 2a. Gracie has calculated £1 and 50p – £1 incorrectly. £1 and 50p – £1 = 50p, not 60p. £1 and 50p – £1 and 30p = 20p.
- 3a. £9 and 60p – £4 and 30p = £5 and 30p.

### Expected

- 4a. Matt has £4 and 85p more than Holly because £8 and 55p – £3 and 70p = £4 and 85p.
- 5a. Harry has subtracted 65p instead of 55p because 20p + 45p = 65p. £6 and 20p – 55p = £5 and 65p.
- 6a. Various answers, for example:  
£8 and 75p – £5 and 30p = £3 and 45p or  
£7 and 95p – £4 and 50p = £3 and 45p

### Greater Depth

- 7a. Jamie has £10 and 50p more than Sarah because £17 and 49p – £6 and 99p = £10 and 50p.
- 8a. Trixie has subtracted £15 and 64p – £3 and 63p incorrectly as it should equal £12 and 1p. The correct answer is: £15 and 64p – £7 and 93p = £7 and 71p.
- 9a. Various answers, for example:  
£13 and 35p – £7 and 29p = £6 and 6p.

## Reasoning and Problem Solving Subtracting Money

### Developing

- 1b. Kim has £5 and 30p more than Dan because £8 and 70p – £3 and 40p = £5 and 30p.
- 2b. Harold has subtracted £2 and 20p instead of £2 and 30p. £3 and 70p – £2 and 30p = £1 and 40p.
- 3b. £7 and 90p – £4 and 50p = £3 and 40p.

### Expected

- 4b. Kate has £1 and 40p more than Sam because £6 and 95p – £5 and 55p = £1 and 40p.
- 5b. Pam has calculated £5 and 75p – £1 incorrectly. £5 and 75p – £1 = £4 and 75p, not £4. £5 and 75p – £1 and 80p = £3 and 95p.
- 6b. Various answers, for example:  
£8 and 95p – £4 and 70p = £4 and 25p or  
£8 and 75p – £4 and 50p = £4 and 25p

### Greater Depth

- 7b. Sue has £9 and 47p more than Josh because £18 and 95p – £9 and 48p = £9 and 47p.
- 8b. Dane has subtracted £7 and 13p instead of £7 and 31p. The correct answer is: £17 and 31p – £8 and 95p = £8 and 36p.
- 9b. Various answers, for example:  
£13 and 48p – £6 and 52p = £6 and 96p.