

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

1a. Emma and Tom have saved some money.

Emma's money



Tom's money



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

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



R

Subtracting Money

1b. Kim and Dan have saved some money.

Dan's money



Kim's money



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

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

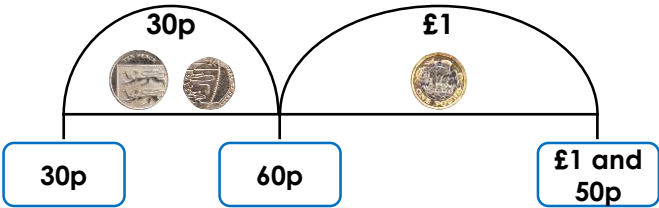


R

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.

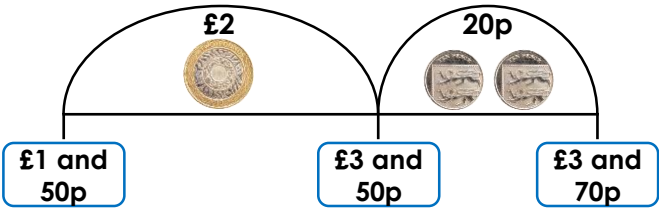


R

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.



6

4



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



PS

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

9



4

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



PS

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

Subtracting Money

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.

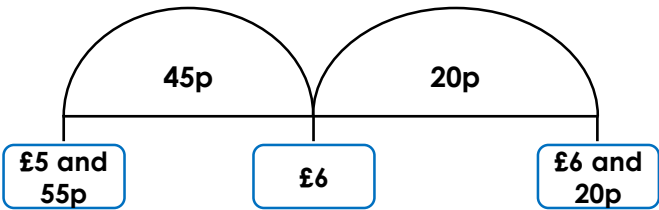


R

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.

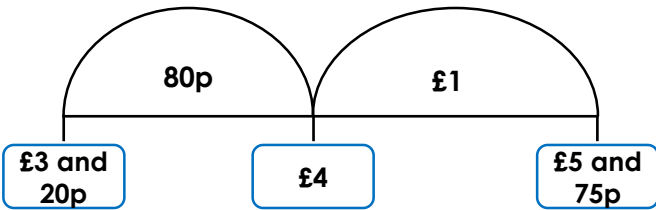


R

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.

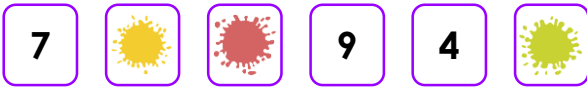


£ and 5p - £ and 0p = £3 and 45p



PS

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



£ and 5p - £ and 0p = £4 and 25p



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.