Summer Block 2

Money

White Rose MATHS

Small steps

Step 1	Pounds and pence
Step 2	Convert pounds and pence
Step 3	Add money
Step 4	Subtract money
Step 5	Find change

Pounds and pence

Notes and guidance

In this small step, children consolidate their knowledge of notes and coins from previous years. They use £ and p notation and read monetary values as, for example, 5 pounds and 10 pence. Decimal notation for money is not introduced until children meet decimals in Year 4

In Year 2, children found that different combinations of coins could equal the same amount. This idea is explored further in this step.

A deeper understanding of place value is encouraged by comparing amounts using <, > and =. In this step, the number of pence does not exceed 100, to prevent the need to exchange groups of 100p for pounds. This is covered in the next step.

Things to look out for

- Children may assume that more coins always have a greater value than fewer coins.
- Children may look at the numbers rather than the units, for example thinking 50p has a greater value than £10
- Children may simply add the number on each note or coin without considering its value, for example thinking that £10 and 5p makes either £15 or 15p.

Key questions

- What is the value of this coin/note?
- What does "£" mean?
- What does "p" mean?
- Is the amount the same or different?
- How many pounds do you have?
  How many pence do you have?
  How much do you have altogether?

Possible sentence stems

- There are _____ pounds.
- There are _____ pence.
- There are _____ pounds and _____ pence.
  There is £_____ and _____p.

National Curriculum links

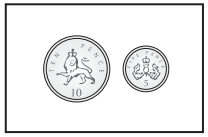
- Add and subtract amounts of money to give change, using both £ and p in practical contexts

Pounds and pence

Key learning

- Match the coins and notes to the amounts.



fifteen pounds	fifteen pence	fifty pounds	fifty pence

- How much money is there in the jar?

There is £ _____ and _____ p.

- How much money does each person have?

Dexter

Annie

Eva

Ron

- Here are some notes and coins.

Choose the fewest number of notes and coins needed to make each amount.

£15 and 75p	38p	£7 and 80p	£55 and 70p

- Write <, > or = to compare the amounts.

Pounds and pence

Reasoning and problem solving

Aisha has £17 and 50p

Scott has £12 and 27p

Who can make their amount with the fewest number of notes and coins?

Explain your answer.

Aisha

Aisha: £10, £5, £2 and 50p

Scott: £10, £2, 20p, 5p and 2p

Amir has five different coins.

What is the greatest amount of money he could have?

What is the least amount of money he could have?

£3 and 80p

38p

Rosie has five silver coins.

She can make 40p with three of the coins.

She can also make 75p with three of the coins.

Which coins does Rosie have?

50p, 20p, 2 × 10p, 5p

Tom and Sam each have two different silver coins.

What coins could Tom and Sam have?

Tom: 5p and 10p

Sam: 10p and 20p

or

Tom: 10p and 20p

Sam: 10p and 50p

Convert pounds and pence

Notes and guidance

In this small step, children use their knowledge of the value of each note and coin to convert pence into pounds and pence. A key learning point is to recognise that 100p = £1, and children should become accustomed to counting pence in groups of 100 and converting to pounds. A strong understanding of place value is helpful, as is a good knowledge of number bonds to 100

Physical and pictorial representations of notes and coins are useful to support children's understanding and allow them to make the conversions effectively.

In this step, the focus is on converting single amounts of pence to pounds and pence. Calculations involving addition and subtraction of amounts of money are covered in the next steps.

Things to look out for

- Children may assume that more coins always have a greater value than fewer coins, regardless of the values of the individual coins.
- Children may not recognise the value of pounds and pence, and see 50p as having a greater value than £48
- Children may make errors with their number bonds to 100

Key questions

- How many pence are there in £1?
  How can you use this to convert £2 to pence?
- How many pence do you have?
- How many groups of 100 can you make?
  How many pounds is this equal to?
  How many pence are remaining?
- How many whole pounds are there in 235p?
- How can you use the fact that £1 = 100p to help you to convert between pounds and pence?

Possible sentence stems

- There are _____ p in £ _____
- _____ p = £ _____ and _____ p
- £ _____ and _____ p = _____ p

National Curriculum links

- Add and subtract amounts of money to give change, using both £ and p in practical contexts

Convert pounds and pence

Key learning

- Here are some coins.

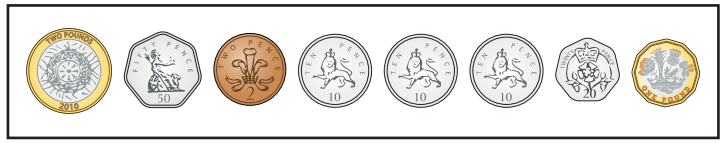
How many groups of 100 pence are there?

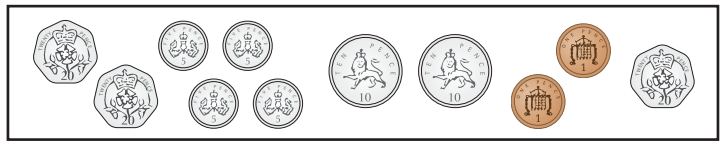
How many pounds do you have?

How many pence are left?

There is £ _____ and _____ p.

- Write the amounts of money in pounds and pence.





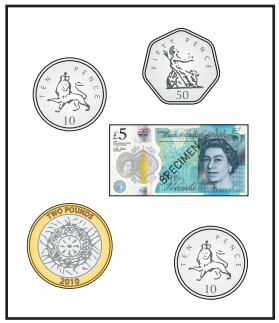
- Write each amount in pounds and pence.

165p	204p	199p	12p	516p

- Match the amounts.

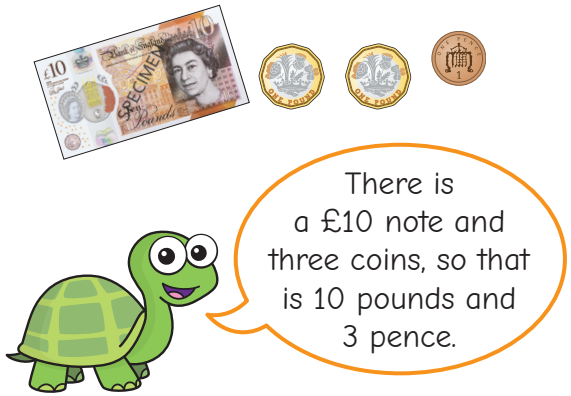
£4 and 20p	42p
£0 and 42p	402p
£2 and 40p	204p
£4 and 2p	420p
£2 and 4p	240p

- How many pence are shown in each amount?



Convert pounds and pence

Reasoning and problem solving



Is Tiny correct?

Explain your answer.

No

Huan and Jack each have the same amount of money.

Huan only has 50p coins.

Jack only has 20p coins.

How much money could they each have?

any number of whole pounds

The children have some coins.

- Esther has five coins.
- Kim has four coins.
- Brett has three coins.
- Nijah has two coins.

They each have 202p.

Which coins could they have?

Esther: £1, 2 × 50p, 2 × 1p or 4 × 50p, 2p

Kim: 2 × £1, 2 × 1p or £1, 2 × 50p, 2p

Brett: 2 × £1, 2p or £2, 2 × 1p

Nijah: £2, 2p

Alex has a £2 coin, a 20p coin and a 2p coin.

What amounts of money could Alex make using one, two or three of her coins?

Write the amounts in pence.

three coins: 222p

two coins: 220p, 202p, 22p

one coin: 200p, 20p, 2p

Add money

Notes and guidance

In this small step, children continue to build on their understanding of pounds and pence by adding money.

Children explore different representations to add money. They begin by using physical notes and coins to add two amounts. They then move on to more abstract representations such as part-whole models and bar models.

Encourage children to add the pounds first and then add the pence. Initially, totals do not cross 100p, but later in the step they need to use their knowledge of converting money to exchange 100p for £1

Children also consider strategies such as adding 99p by adding £1, then subtracting 1p.

Things to look out for

- Children may not exchange 100p for £1 when adding the pounds and pence separately, for example £3 and 40p + £4 and 80p = £7 and 120p instead of £8 and 20p.
- Children may mix up pounds and pence when adding them together, for example £2 and 75p + £3 = £2 and 78p.

Key questions

- Which coins do you need to add together?
- Which coins can you group to make a pound?
- How can an estimate help you to add the amounts?
- How many pounds are there altogether?
- How many pence are there altogether?
- Why is adding 99p the same as adding £1 and subtracting 1p?
- Which method do you prefer? Why?

Possible sentence stems

- £ _____ + £ _____ = £ _____
- _____ p + _____ p = _____ p
- _____ p is equal to £ _____ and _____ p.
- £ _____ and _____ p + £ _____ and _____ p
  = £ _____ and _____ p

National Curriculum links

- Add and subtract amounts of money to give change, using both £ and p in practical contexts

Add money

Key learning

- Mo has £3 and 30p.

Sam has £2 and 10p.

Complete the sentences to work out how much money they have altogether.

£3 + £2 = £ _____

30p + 10p = _____ p

£ _____ + _____ p = £ _____ and _____ p

- Jack has £3 and 50p.

Dora has £5 and 60p.

Complete the sentences to work out how much money they have altogether.

£ _____ + £ _____ = £ _____

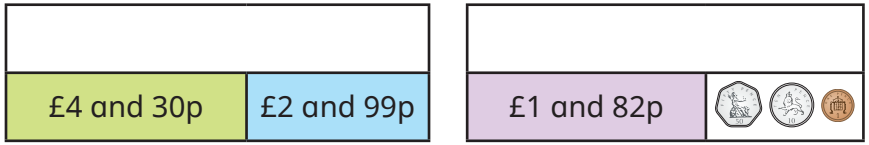
_____ p + _____ p = _____ p

_____ p = £ _____ and _____ p

£ _____ + £ _____ + _____ p = £ _____ and _____ p

- Complete the number sentences.
  - £4 and 14p + £2 and 83p = £ _____ and _____ p
  - £3 and 20p + £4 and 80p = £ _____ and _____ p
  - £8 and 40p + £6 and 80p = £ _____ and _____ p
  - £12 and 39p + £8 and 83p = £ _____ and _____ p

- Complete the bar models.



- A book costs £5 and 99p.

  A magazine costs £1 and 75p.

  How much do the book and magazine cost altogether?

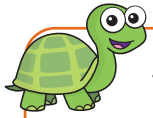
- Whitney has £5 to spend.

  She wants to buy a T-shirt and a hat.

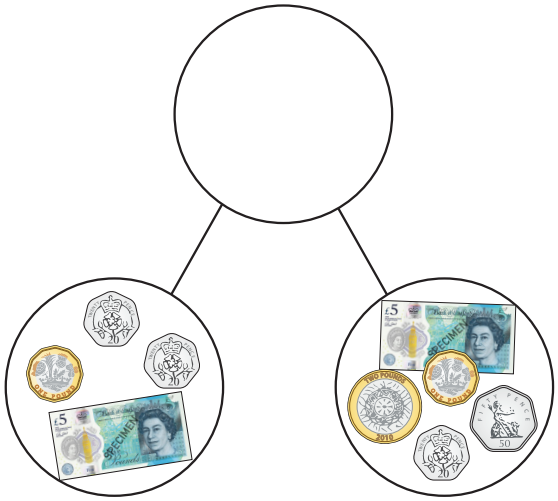
  Does Whitney have enough money?

Add money

Reasoning and problem solving



Tiny is working out the total.



£6 + £8 = £14

40p + 70p = 110p

The total is £14 and 110p.

Do you agree with Tiny?

Explain your answer.

No

Tiny has not converted 110p to £1 and 10p.

The total is £15 and 10p.

Eva has £5

Does she have enough money to buy a toy car and two apples?

Eva wants to buy three items.

What combinations of items could she buy with £5?

No

1 car and 2 balloons

1 car, 1 apple and 1 balloon

1 comic and 2 apples

1 comic and 2 balloons

1 comic, 1 apple and 1 balloon

Subtract money

Notes and guidance

In this small step, children continue to build on their understanding of pounds and pence by subtracting money.

Children explore different representations to subtract money. They begin by using notes and coins to subtract pounds and pence separately, including examples where they exchange coins to help them subtract. For example, when working out £4 and 50p subtract £2 and 10p, they can exchange one 50p coin for five 10p coins, so that they can physically remove £2 and 10p.

Children then move on to using number lines to count on or back to calculate the difference between two amounts. These include examples where they need to use their knowledge of converting money to exchange £1 for 100p.

Things to look out for

- When subtracting the pence separately, children may subtract the greater amount first instead of exchanging from the pounds. For example, when working out £4 and 20p subtract £1 and 50p, children may do 50p – 20p = 30p.
- Number bonds to 100 can be tricky and children may include an extra ten, for example 100 – 37 = 73

Key questions

- Which notes/coins do you need to subtract?
- How can you make _____ in a different way to make it easier to subtract _____?
- Are you going to count back on the number line or count on? Why?
- Do you need to exchange any pounds for pence?
- Which method do you prefer? Why?

Possible sentence stems

- £_____ – £_____ = £_____
- _____p – _____p = _____p
- The whole is £_____ and _____p.

  One part is £_____ and _____p and the other part is £_____ and _____p.

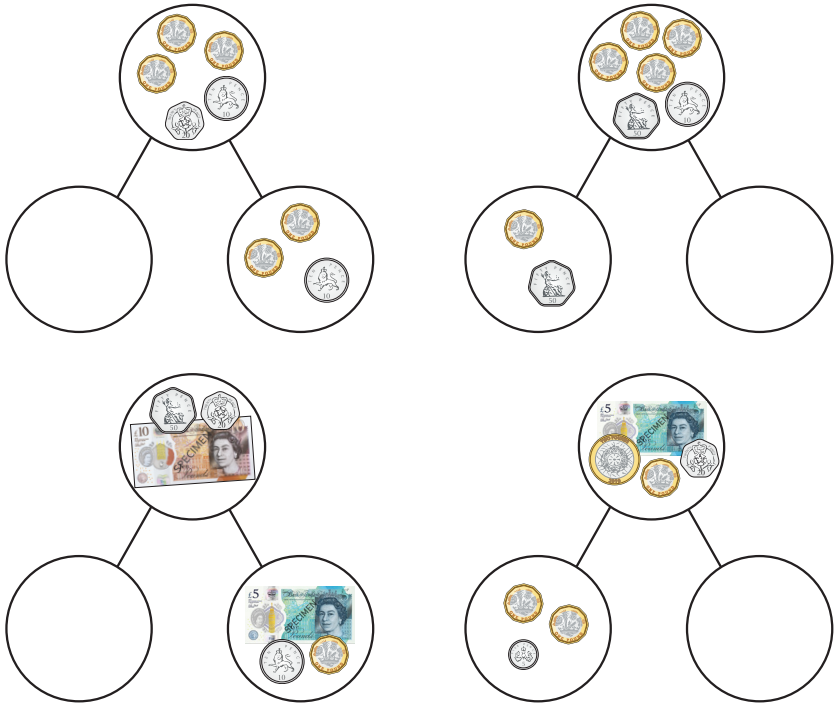
National Curriculum links

- Add and subtract amounts of money to give change, using both £ and p in practical contexts

Subtract money

Key learning

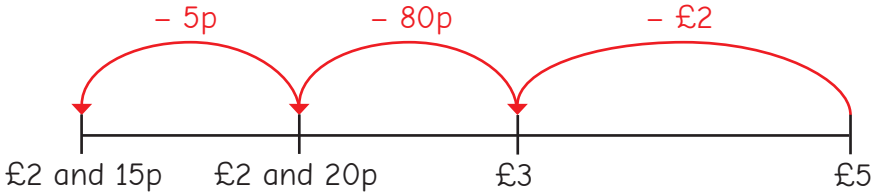
- Complete the part-whole models.



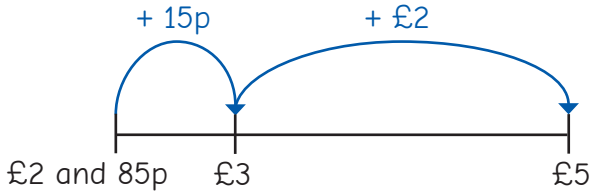
- Complete the subtractions.
  - £5 and 30p – £1 and 10p
  - £8 and 75p – £4 and 45p
  - £6 and 80p – £5 and 32p
  - £12 and 99p – £12 and 84p

- Huan and Rosie are subtracting £2 and 85p from £5

  Huan counts back from £5



  Rosie counts on from £2 and 85p.



  They both get the answer £2 and 15p.

  Use one of their methods to work out the subtractions.

£10 – £6 and 55p	£4 and 30p – £1 and 90p

- Dora has £7 and 50p.

  She gives £4 and 80p to her sister.

  How much money does Dora have left?

Subtract money

Reasoning and problem solving

Tiny is working out
£8 and 20p – £5 and 30p.

£8 – £5 = £3

30p – 20p = 10p

£8 and 20p – £5 and 30p = £3 and 10p

Do you agree with Tiny?

Explain your answer.

No

Tom is using a number line to work out £2 and 15p – £1 and 80p.

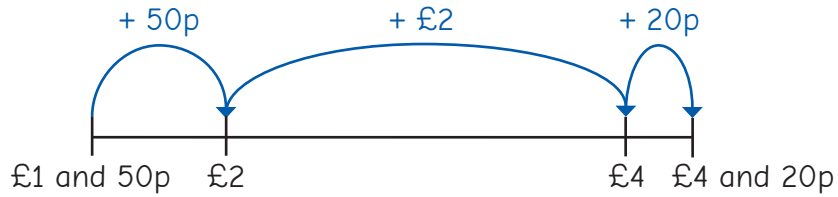
Should he count on from £1 and 80p or count back from £2 and 15p?

Which method do you prefer?

Explain your answer.

Compare methods as a class.

Ron uses a number line to subtract money.



What subtraction is Ron working out?

What is the answer?

£4 and 20p – £1 and 50p | £2 and 70p

A box of crayons costs £3 and 10p

A box of crayons costs £1 and 65p more than a notebook.

A notebook costs 48p more than a pen.

How much does a pen cost?

97p

Find change

Notes and guidance

In this small step, children build on their understanding of subtracting money to find change.

Use notes and coins to model what happens when change is needed. It is important to encourage role-play, so that children understand the context of giving and receiving change.

Children use number lines and part-whole models to subtract to find change. They can explore both counting on and counting back as methods of finding the difference to find change.

For some questions, children need to use their knowledge of converting money to exchange £1 for 100p. In other questions, they are given the amount of change and need to find the total amount of a set of items.

Things to look out for

- Children may not be confident with converting money. They need to know that they can exchange £1 for 100p to support them finding the correct amount of change.
- Children may confuse the verb and noun for "change", so it is important to ensure they understand that "change" in this context is the amount of money they are left with.

Key questions

- When talking about money, what does "change" mean?
- How can you partition _____ to make it easier to find the amount of change needed?
- Are you going to count back on the number line or count on? Why?
- Do you need to exchange any pounds for pence?
- Which method do you prefer?
- How does the part-whole model help to solve the problem?

Possible sentence stems

- £ _____ subtract £ _____ is equal to £ _____
- _____ p subtract _____ p is equal to _____ p.
- The difference between _____ and _____ is _____, so I will get _____ change.

National Curriculum links

- Add and subtract amounts of money to give change, using both £ and p in practical contexts

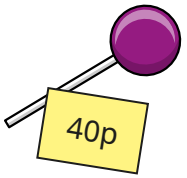
Find change

Key learning

- A lollipop costs 40p.

  Brett pays for one lollipop with a £1 coin.

  How much change will he receive?

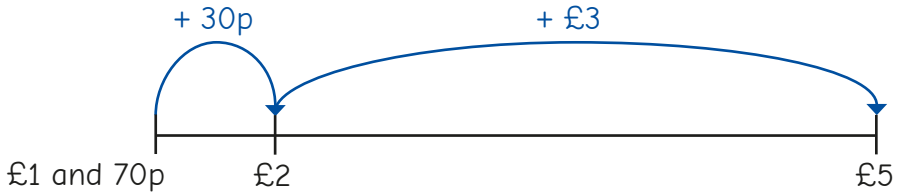


- A teddy costs £1 and 70p.

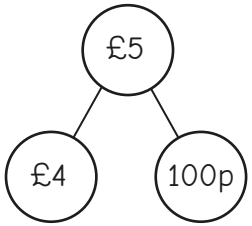
  Rosie pays with a £5 note.

  Mo and Tommy are working out how much change Rosie will get.

  Mo uses a number line.



  Tommy uses a part-whole model.



£4 – £1 = £3

100p – 70p = 30p

  They both get the answer £3 and 30p.

  Which method do you prefer? Why?

- An ice cream costs £1 and 60p.

  Esther pays with a £5 note.

  How much change will she receive?

- Nijah buys a bottle of water for £1 and 20p.

  She pays with a £2 coin.

  How much change does she get?

- Dora buys a bag of pears.

  She pays with a £2 coin and gets this change.

  How much do the pears cost?

- Annie buys a hat for £6 and 35p.

  She pays with a £10 note.

  How much change does she get?

  Explain your method to a partner.

Find change

Reasoning and problem solving

A sticker book costs £4 and 60p.

A football costs £3 and 45p.

Teddy buys a sticker book and a football.

He pays with a £10 note.

How much change does he get?

£1 and 95p

Aisha spends £7 and 76p on a birthday cake.

She pays with a £10 note.

How much change does she get?

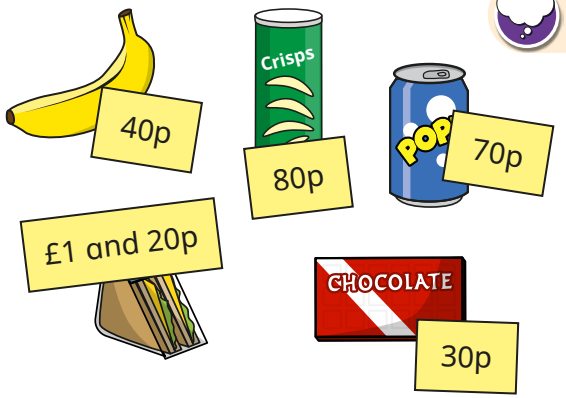
She gets six coins for her change.

What coins could they be?

£2 and 24p

multiple possible answers, e.g.

2 × £1, 2 × 10p, 2 × 2p



Amir buys three items and pays with this money.

He receives this change.

What items could he have bought?

Is there more than one possibility?

two possibilities:

sandwich, banana and drink

sandwich, crisps and chocolate