Mrs Jones' Maths Group
04.05.20

LO: To be able to use decimal notation for money

Success Criteria

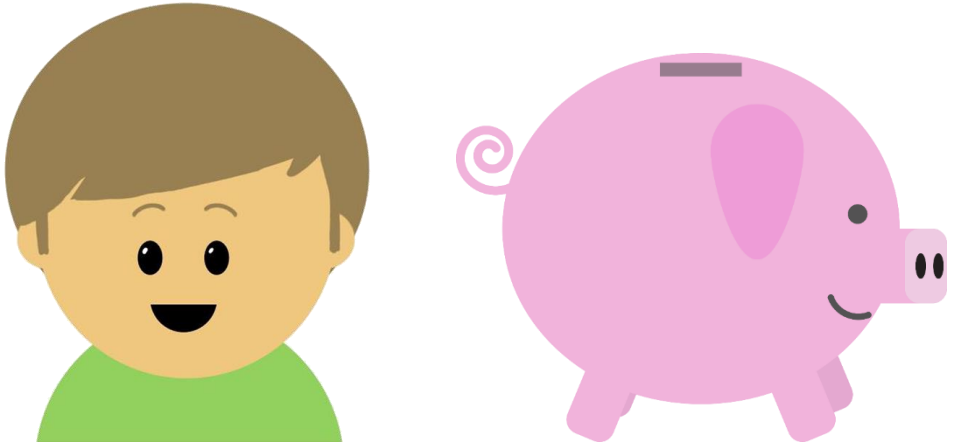
- I can recap what I learnt about money in Year 3
- I can use decimal notation to record money
- I can convert between different units of money
- I can record answers to part whole models
- I can use my knowledge to solve problems (challenge question)

Either work through the powerpoint slides or watch
https://whiterosemaths.com/homelearning/year-4/

Select Summer week 2, lesson 3 – and complete the questions at the end of the powerpoint explanation.

Let's do this!

Jerry has 2 gold, 3 silver and 4 bronze coins in his piggy-bank.



What is the most money he could have?

What is the least money he could have?

Let's revisit what we should know…

The coins and notes we use have different values.

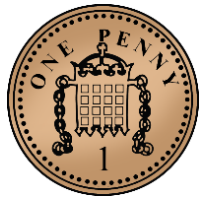
Let's revisit what we should know

Amounts of money can be represented in different ways.

These groups of coins are all worth £1 or 100p.

Let's learn

Let's look at the value of pounds and pence.



1p = **1** _____ of £1

10p = **1** _____ of £1

Let's learn

Let's look at the **value** of pounds and pence.

£1 = 100p

£1	Tenths of £1	Hundredths of £1
		

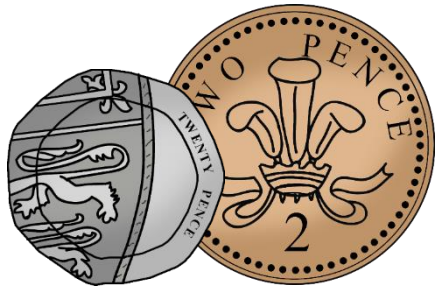
1p = **1 hundredth** of £1

£1 = 10 × 10p therefore 10p = **1 tenth** of £1

The amount shown can be written as **£1.11** or **111p**

Let's talk

How much money is represented here?

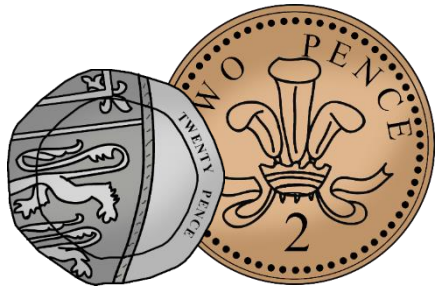


Write it in 2 different ways.

Why is a decimal point written between the pounds and pence?

Let's talk

How much money is represented here?



There is _____ pounds and _____ pence.

There is £ ___.___ ___

Let's develop our learning

Use your understanding to convert these amounts.....

561p = £_._ _

£1.34 = p

34p = £_._ _

£0.99 = p

Pounds and pence

1 How much money is there?

☐ p

£ ☐

What is the same and what is different?

2

a) Complete the statements.

There is ☐ pounds.

There is ☐ pence.

There is £ ☐ and ☐ p.

There is £ ☐

b) Draw money so that there are fewer coins but the same total amount.

3 Match the amounts that are equal.

Fill in the missing digits.

460p	£___ and ___p	£4.62
420p	£4 and 62p	£4.06
____p	£4 and 6p	£4.20
462p	£4 and 20p	£___.___
426p	£4 and 26p	£4.60

4 Match the person to the correct amount.

I have a note and some coins.

Ron

I have more than Ron.

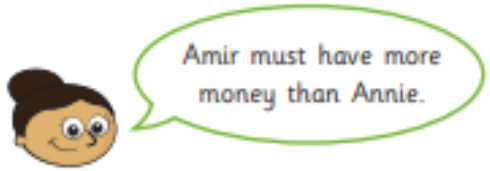
Rosie

I have the most money.

Jack

5 Amir has a note in his pocket.

Annie has three coins in her pocket.



Do you agree with Dora? _____

Explain your answer.

_____

_____

6 Kim has four coins.

- The coins add to a multiple of 10
- The total amount is more than £1
- All the coins are silver.
- The total is less than £1.50

a) Which four coins could Kim have?

_____

b) How many different combinations can you find?

7 Mo has this money.

Decide whether Mo's statements are true (T) or false (F).

Circle your answer and give a reason for your choice.

a) 

T F

_____

b) 

T F

_____

c) 

T F

_____

d) 

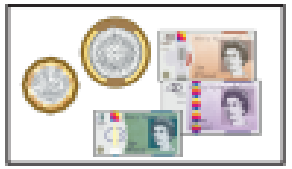
T F

_____

Pounds and pence

1 How much money is there?

38 p



£ 38

What is the same and what is different?

2

a) Complete the statements.

There is 4 pounds.

There is 75 pence.

There is £ 4 and 75 p.

There is £ 4·75

b) Draw money so that there are fewer coins but the same total amount.

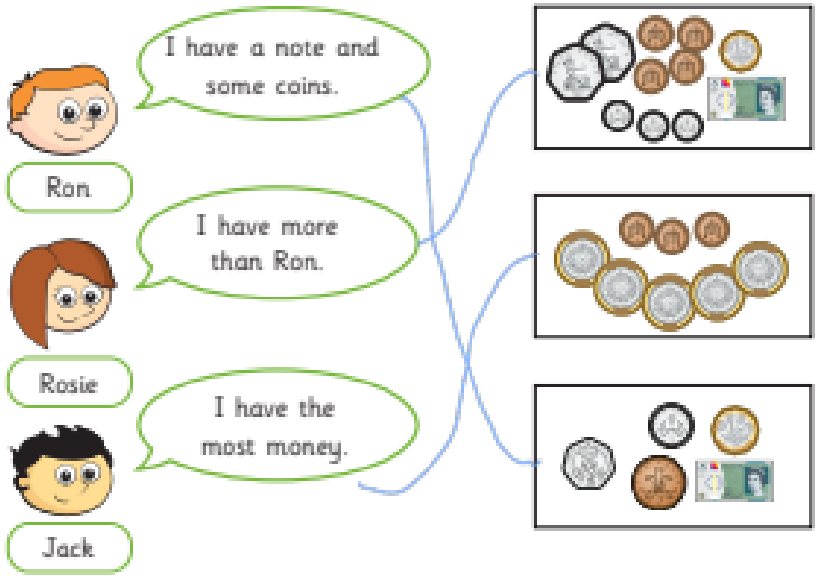
e.g. £2 £2 50p 20p 5p

3 Match the amounts that are equal.

Fill in the missing digits.

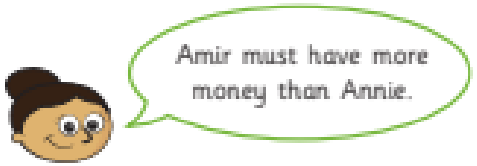
460p	£4 and 60p	£4.62
420p	£4 and 62p	£4.06
406p	£4 and 6p	£4.20
462p	£4 and 20p	£4.26
426p	£4 and 26p	£4.60

4 Match the person to the correct amount.



5 Amir has a note in his pocket.

Annie has three coins in her pocket.



Do you agree with Dora? No

Explain your answer.

Amir could have a £5 note and Annie could have three £2 coins.

6 Kim has four coins.

- The coins add to a multiple of 10
- The total amount is more than £1
- All the coins are silver.
- The total is less than £1.50

a) Which four coins could Kim have?

e.g. 50p 50p 20p 10p

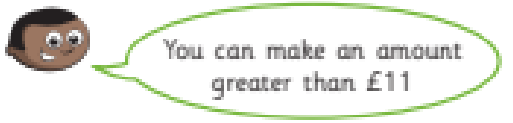
b) How many different combinations can you find?

7 Mo has this money.

Decide whether Mo's statements are true (T) or false (F).

Circle your answer and give a reason for your choice.

a)



T F

Mo has £11.21 altogether.

b)

T F

No combination of 3 coins makes £1.50

c)

T F

£1 + 50p + 50p + 2p = £2.02

d)

T F

£5 + £1 + 5p + 2p + 2p + 2p = £6.11

Challenge questions

YR4 PROGRESSION IN MASTERY LESSON PACK - POUNDS AND PENCE

PROBLEM SOLVING TASKS

PROBLEM SOLVING 1

Anita, Asha, Caleb and Jerry each choose <u>four</u> coins from the money bag below.

Here are the totals they claim to have.

I have two pounds and twenty-seven pence.

I have £1.53.

I have one hundred and thirty-one pence.

I have two pounds and seventy pence.

Which children must be incorrect? Why?

Problem Solving 1

3 children are incorrect

Caleb (£2.27) is incorrect as he would need 5 of the coins – 2 x £1 + 1 x 20p + 1 x 5p + 2 x 1p coins

Anita (£1.53) is incorrect as there are not enough coins to make the total. She could pick 1 x £1 + 1 x 50p but there are only 2 x 1p – she needs 1p more.

Asha (£1.31) is incorrect as there is no 10p coin – she would need 1 x £1 + 1 x 20p + 1 x 10p + 1 x 1p

Jerry (£2.70) is the only child who can collect his total with 4 coins. 2 x £1 + 1 x 50p + 1 x 20p

05.05.20

LO: To be able to order money

Success Criteria

- I can use my knowledge that £1=100p to compare amounts
- I can order amounts represented the same way
- I can order amounts written in different ways (mixed pounds and pence)
- I can solve money problems (Challenge questions)

Ordering Money

Either work through the powerpoint slides or watch

https://whiterosemaths.com/homelearning/year-4/

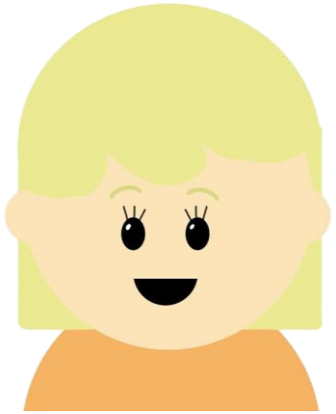
Select Summer week 2, lesson 4.

Then complete the worksheets in your book.

Let's do this!

Jerry and Jane have the same amount of money.

I have 3 gold, 6 silver and 2 bronze coins.



I have 6 gold, 3 silver and 4 bronze coins.

How much could they have?

Let's revisit what we should know

£1 = 100p

£1	of £1	of £1
		

1p = **1** _____ of £1

10p = **1** _____ of £1

Let's revisit what you should know

Use the stem sentences to show much money is represented here.

£1	Tenths of £1	Hundredths of £1
		

There is _____ pounds and _____ pence.

There is £ ___.___ ___

Let's talk

We use our knowledge of **place value** when we order money.

Look at these amounts and analyse their digit values….

2,367p

2,345p

The digit ___ represents _____ pounds/pence.

Let's learn

We know 2,367p is greater than 2,345p.

2,367p	2,345p
The digit 2 represents 2,000p or £20 The digit 3 represents 300p or £3 The digit 6 represents 60p The digit 7 represents 7p	The digit 2 represents 2,000p or £20 The digit 3 represents 300p or £3 The digit 4 represents 40p The digit 5 represents 5p

Both amounts have £23 pounds or 2,000p and 300p.
2,367p has 2 more 10ps than 2,345p. Therefore, it is greater.

Let's learn

Which of these amounts is the largest?

£21.56 £21.65

£__ __.__ __ has ____ pounds and ____p.

£__ __.__ __ has ____ pounds and ____p.

Both amounts have ____ pounds.

£__ __.__ __ has more pence than £__ __.__ __. Therefore, it is greater.

Let's learn

Which of these amounts is the largest?

£12.06 £ 2.66

£__ __.__ __ has ____ pounds and ____p.

£__.__ __ has ____ pounds and ____p.

£__ __.__ __ has more pounds than £__.__ __. Therefore, it is greater.

Let's develop our learning

Money can be written in different ways…

£21.56 | 25p | £4.56 | £0.75 | 1,678p

To compare amounts, we must convert them into the same units.

2,156p | 25p | 456p | 75p | 1,678p

Now, we can compare their digit values.

Let's develop our learning

2,156p

1,678p

These have amounts of pence into the thousands.

456p This has an amount of pence into the hundreds.

75p

25p

These have amounts of pence in tens and ones.

Let's talk

2,156p

1,678p

2,156p is larger because…

456p

456p is larger / smaller than _____p because…

75p

25p

25p is smaller because…

Let's develop our learning

We now know that…

25p < 75p < 456p < 1,678p < 2,156p

However, we need to order the original values!
So…

25p < £0.75 < £4.56 < 1,678p < £21.56

Let's develop our learning

Find an amount of money that could go in between these values.

116p		£0.75
£0.02		6p
£14.16		1,406p

Ordering money

1 What is the value of the digit 2 in these amounts?

a) 524p _____

b) £24 and 50p _____

c) £54.02 _____

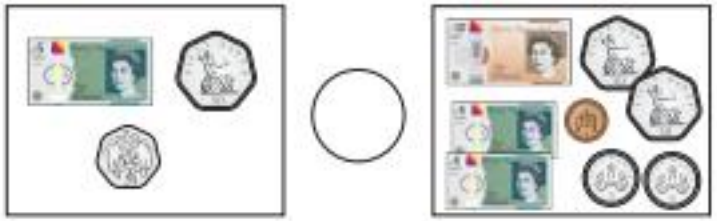
d) 5,240p _____

e) £42.54 _____

f) 2,544p _____

2 Write <, > or = to compare each pair of amounts.

a) 

b) 

c) How did you compare the amounts?

3 Draw three coins in each box to make the statements correct.

£26.70 <

£26.70 >

£26.70 =

Is there more than one way to make each statement correct?

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

a) 743p ◯ 734p

b) £37.40 ◯ £37.04

c) £3.74 ◯ 734p

d) £40.07 ◯ 4,003p

e) 4,037p ◯ £40.37

f) 7,304p ◯ £73.40

5 a) Write the amounts in ascending order.

270p 2,007p 2,700p 720p 7,020p

b) Write the amounts in descending order.

£4.65 £46.50 £6.45 £45.60 £46.05

c) Write the amounts in ascending order.

£21.89 1,289p 8,291p £82.19 9,128p

d) Write the amounts in descending order.

£5.05 550p 5,500p £50.50 £55.05

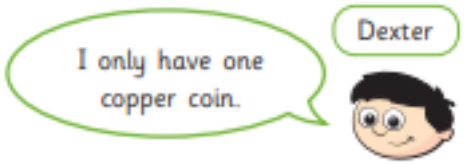
6 Huan has three different silver coins in his hand.

What amounts could he have?

Write them in ascending order.

7 Teddy has £6.55 and Annie has 673p.

Dexter has more money than Teddy, but less than Annie.



a) How much money could Dexter have? £ ☐

b) What different amounts can you find?

8 What could the missing amount of money be?

369p < £ ☐☐.☐☐ < £16.63

Use the digit cards to complete the inequality.

1	3	6	9	0

Use each digit card once only.

You do not need to use every card.

Compare answers with a partner. How many different answers can you find?

Ordering money

1 What is the value of the digit 2 in these amounts?

a) 524p 20p

b) £24 and 50p £20

c) £54.02 2p

d) 5,240p £2

e) £42.54 £2

f) 2,544p £20

2 Write <, > or = to compare each pair of amounts.

a)  >

b)  < 

c) How did you compare the amounts?

3 Draw three coins in each box to make the statements correct.

e.g.

£26.70	<	
£26.70	>	
£26.70	=	

Is there more than one way to make each statement correct?

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

a) 743p > 734p

b) £37.40 > £37.04

c) £3.74 < 734p

d) £40.07 > 4,003p

e) 4,037p = £40.37

f) 7,304p < £73.40

5 a) Write the amounts in ascending order.

270p 2,007p 2,700p 720p 7,020p

270p 720p 2,007p 2,700p 7,020p

b) Write the amounts in descending order.

£4.65 £46.50 £6.45 £45.60 £46.05

£46·50 £46·05 £45·60 £6·45 £4·65

c) Write the amounts in ascending order.

£21.89 1,289p 8,291p £82.19 9,128p

1,289p £21·89 £82·19 8,291p 9,128p

d) Write the amounts in descending order.

£5.05 550p 5,500p £50.50 £55.05

£55·05 5,500p £50·50 550p £5·05

6 Huan has three different silver coins in his hand.

What amounts could he have?

Write them in ascending order.

35p 65p 75p 80p

7 Teddy has £6.55 and Annie has 673p.

Dexter has more money than Teddy, but less than Annie.

a) How much money could Dexter have?

e.g. £ 6·71

b) What different amounts can you find?

8 What could the missing amount of money be?

e.g. 369p < £ 1 3 · 9 6 < £16.63

Use the digit cards to complete the inequality.

1	3	6	9	0

Use each digit card once only.

You do not need to use every card.

Compare answers with a partner. How many different answers can you find?

Challenge questions

YR4 PROGRESSION IN MASTERY LESSON PACK - ORDERING MONEY

PROBLEM SOLVING TASKS

PROBLEM SOLVING 1

Anita has these 4 digit cards only.

4 6 8 0

£ □□.□□

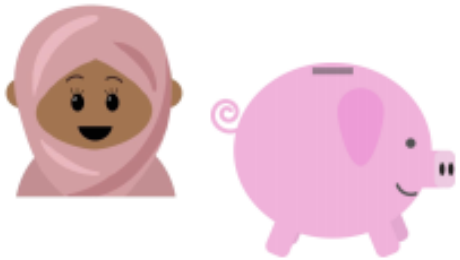
If she uses them all to make amounts of money, how many different values will she have?

NOW...

Place the values in ascending order.

PROBLEM SOLVING 2

Asha has four silver coins in her piggy bank.



Write all of the possible amounts that she could have.

NOW...

Place the amounts in descending order.

What is the difference between the smallest amount and the largest amount she could have?

Problem Solving 1

There are 18 possible amounts. They have been ordered in ascending order:

£40.68	£40.86	£46.08	£46.80	£48.06	£48.60
£60.48	£60.84	£64.08	£64.80	£68.04	£68.40
£80.46	£80.64	£84.06	£84.60	£86.04	£86.40

Problem Solving 2

Possible Amounts:	Descending Order:
4 x 5p = 20p	£2
1 x 10p + 3 x 5p = 25p	£1.70
2 x 10p + 2 x 5p = 30p	£1.60
3 x 10p + 1 x 5p = 35p	£1.55
4 x 10p = 40p	£1.40
1 x 20p + 3 x 10p = 50p	£1.40
2 x 20p + 2 x 10p = 60p	£1.10
3 x 20p + 1 x 10p = 70p	£1.10
4 x 20p = 80p	80p
1 x 20p + 3 x 5p = 35p	80p
2 x 20p + 2 x 5p = 50p	70p
3 x 20p + 1 x 5p = 65p	65p
4 x 50p = £2	65p
3 x 50p + 1 x 20p = £1.70	60p
2 x 50p + 2 x 20p = £1.40	50p
1 x 50p + 3 x 20p = £1.10	50p
3 x 50p + 1 x 10p = £1.60	40p
2 x 50p + 2 x 10p = £1.40	35p
1 x 50p + 3 x 10p = 80p	35p
3 x 50p + 1 x 5p = £1.55	30p
2 x 50p + 2 x 5p = £1.10	25p
1 x 50p + 3 x 5p = 65p	20p

06.05.20

LO: To be able to estimate money

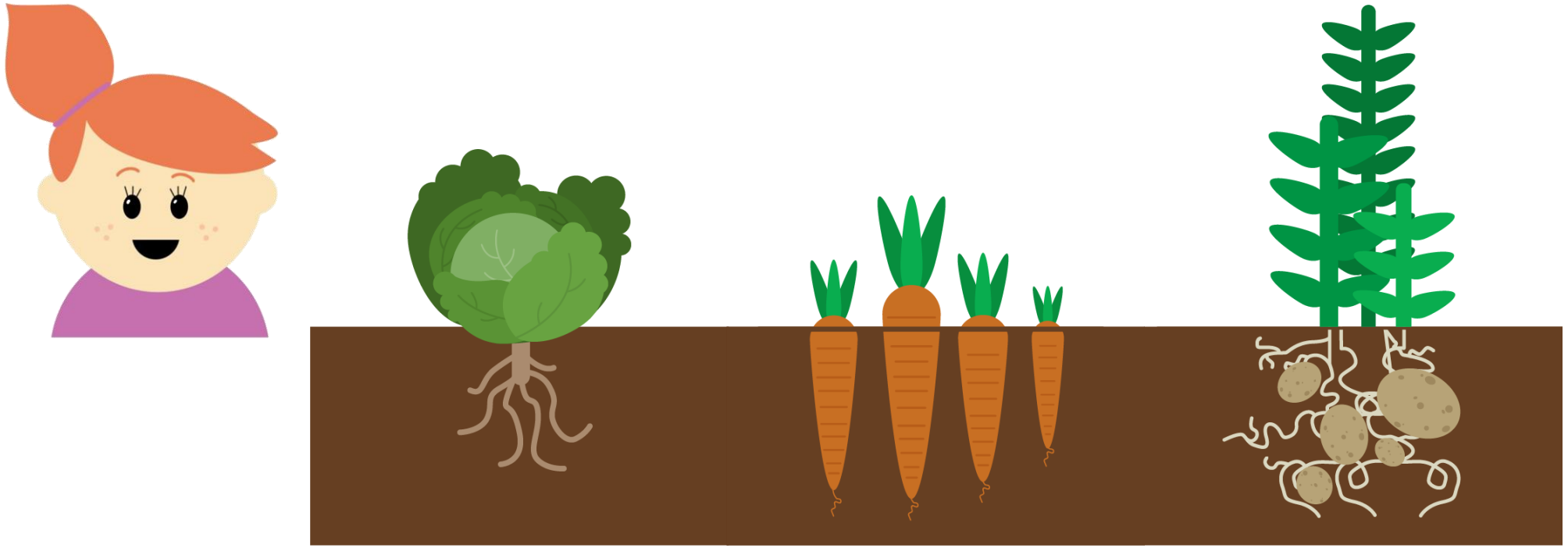
Success Criteria

- I can round amounts of money to the nearest pound.
- I can estimate the total of 2 amounts
- I can estimate using more than 2 amounts
- I can use my knowledge to solve problems (challenge question)

Unfortunately there are no White Rose videos available so please work through the powerpoint slides.
Then complete the worksheets in your book, this is the green White Rose sheets.

Let's do this!

Millie needs to buy 12 of each vegetable plant.
To the nearest whole £, how much will she need to spend?



26p each	48p each	94p each

Let's revisit what we should know

We look at the **value** of each digit when we compare amounts.

£32.56 £32.65

£__ __.__ __ has ____ pounds and ____p.

£__ __.__ __ has ____ pounds and ____p.

Therefore, £__ __.__ __ is the largest number.

Let's revisit what we should know

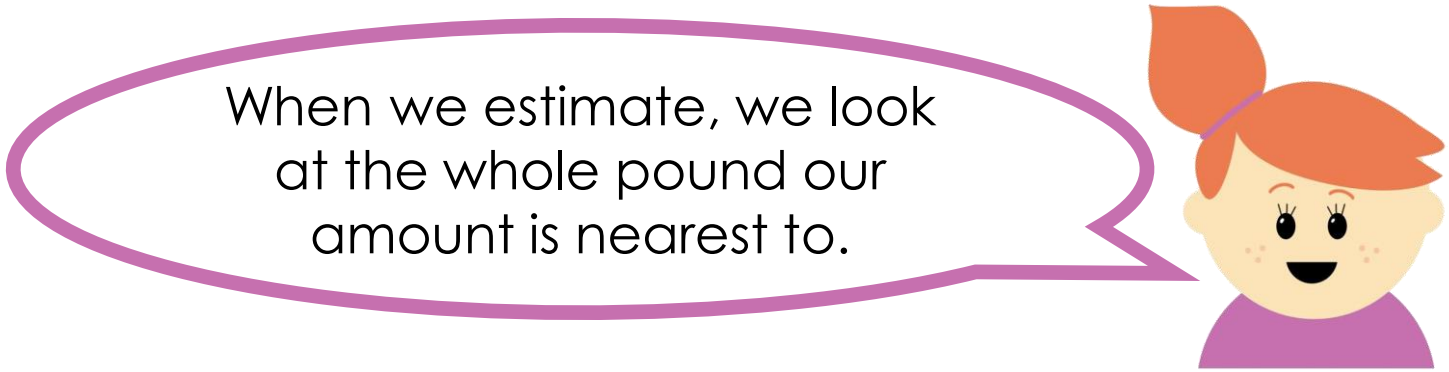
We look at the whole number when rounding.

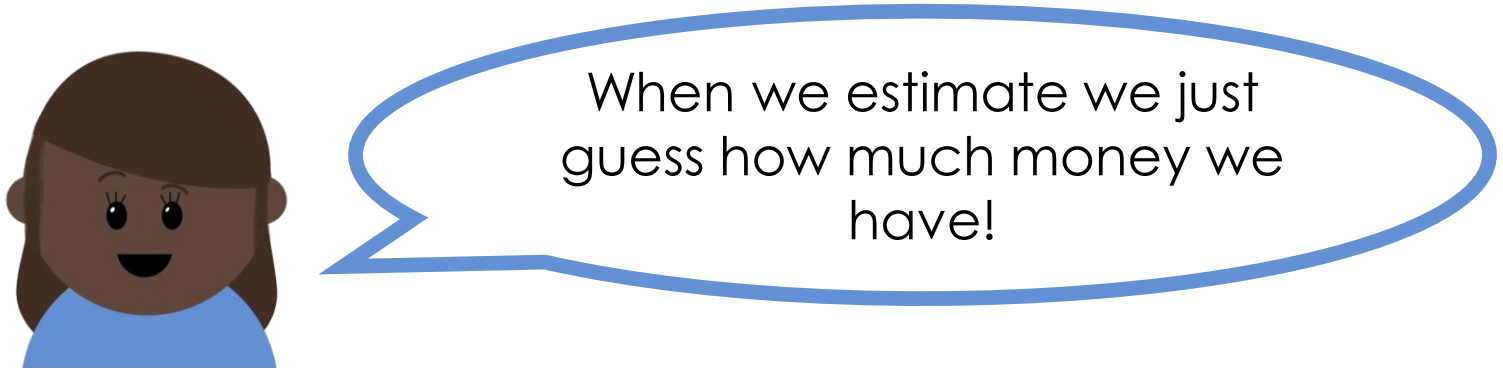
34<u>6</u> is **6** away from **340** but **4** away from **350**
Therefore it rounds up to **350** to the nearest 10.

3<u>4</u>6 is **46** away from **300** but **54** away from **400**
Therefore it rounds down to 300 to the nearest 100.

Let's talk

The children are discussing what 'to estimate' means.

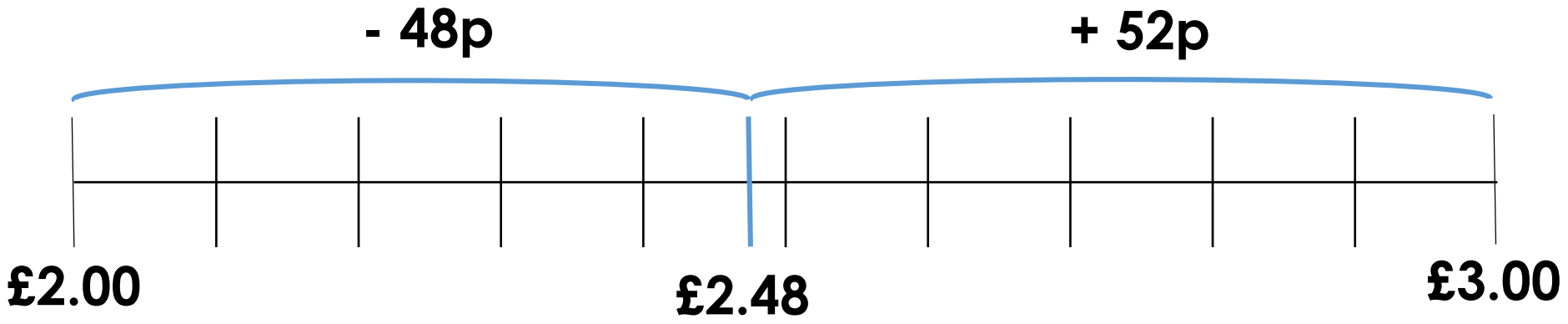




Who do you agree with?

Let's learn

When we estimate to the nearest pound,
we apply our knowledge of rounding.



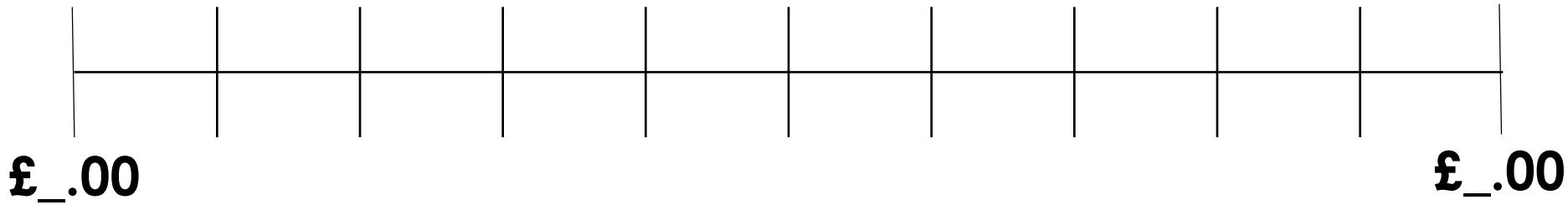
£2.48 is **48p** away from £2.00 but **52p** away from £3.00

£2.48 rounds down to £2.00

Let's talk

Which whole pounds is **£4.35** between?

Where will £**4.35** go on the number line?

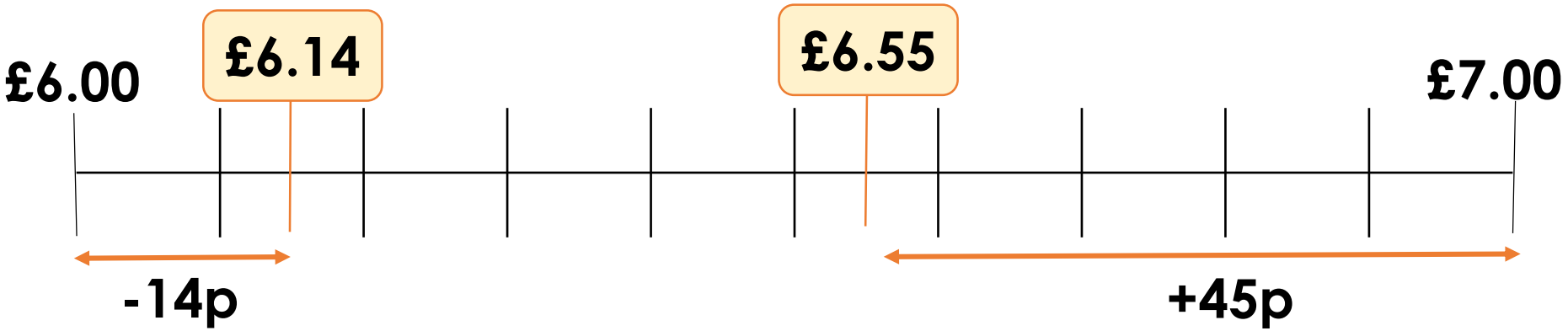


Which whole pound is it nearer to?

Let's develop our learning.

We can also round to help estimate the cost of two or more items.

£6.14 and **£6.55**

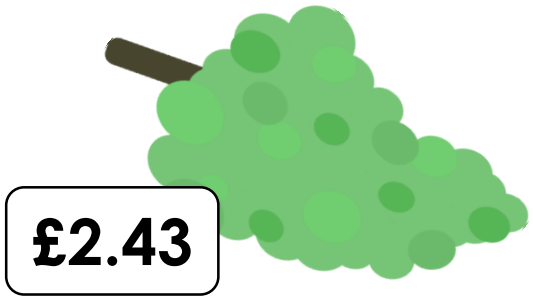


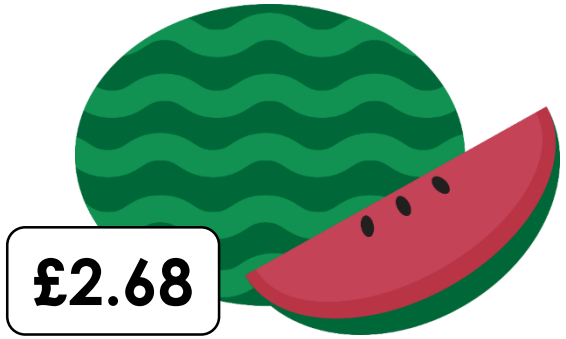
£6.14 **is nearer to** £6.00 **and** £6.55 **is nearer to** £7.00

£6.00 + £7.00 = £13.00

Let's talk

Round these prices to the nearest £1 and find the total.





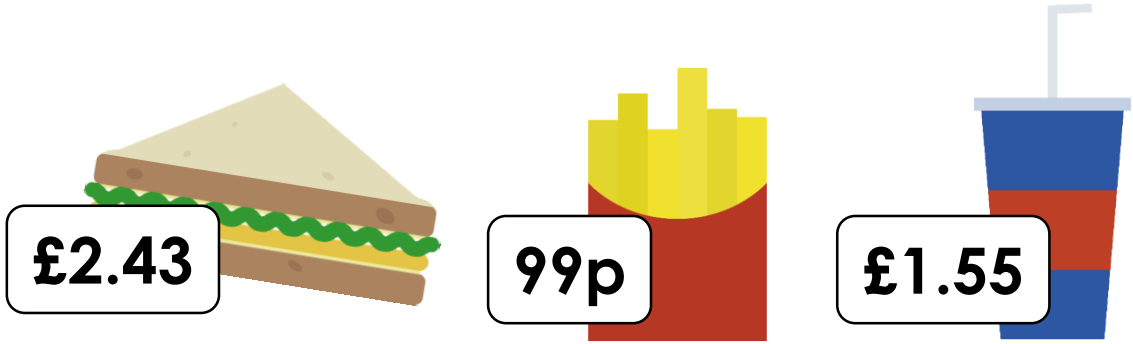
Now add both actual prices together.

Could you afford to buy both items if you only had £5?

Let's develop our learning

We need to make sure we choose the best estimate.

We can do this by looking at the **pence** and combining amounts together.

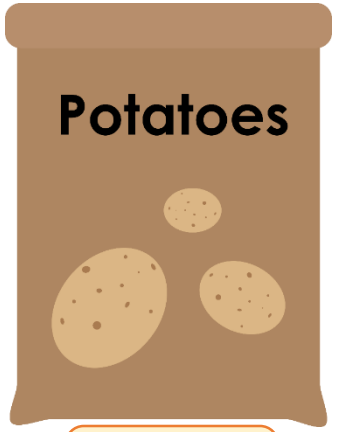


43p + **55p** = **98p** which is almost **£1**

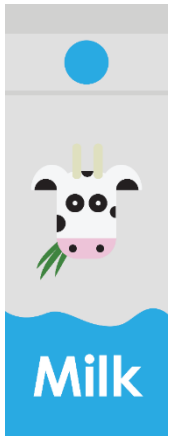
£2 + £1 + £1 + £1= £5

Let's talk

Estimate the total cost of these items.



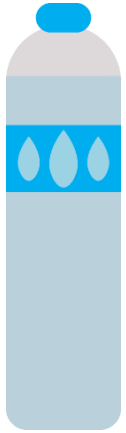
£2.45



£0.67

49p

184p

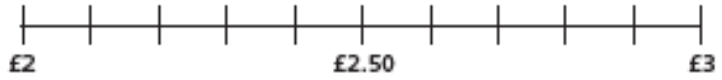


£1.06

How will you combine the items?

Estimating money

1 a) Complete the number line.



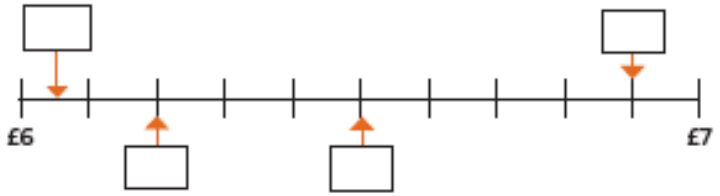
b) Which amounts round to £3?

c) What do you notice about the amounts that round to £2 and the amounts that round to £3?

2 Here are some amounts of money.

£6.90 £6.20 £6.50 £6.05

a) Use the amounts to label the number line.



b) Sort the amounts into the table.

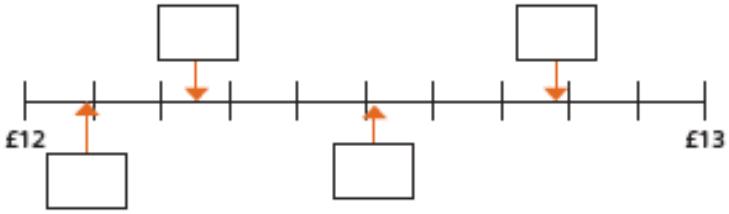
Rounds to £6	Rounds to £7

3 a) Estimate where each amount is on the number line.

Which amounts were difficult to place on the number line?

b) Which amounts round to £9?

4 a) Write an estimate for each of the missing amounts.



b) Which amounts round to £12?

5 Eva buys a book for £4.85 and a pen for £2.70

The total will be approximately £6 because £4 plus £2 is £6

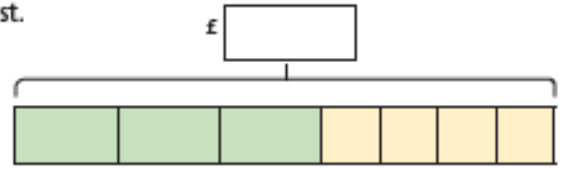
What would be a more accurate estimate for Eva to make?

Explain your answer.

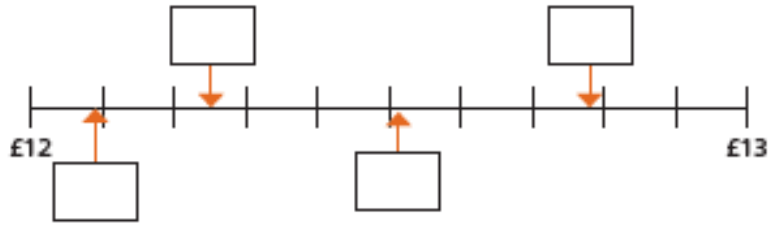
6 A football costs £5.65 and cones cost £1.49 each.

Alex wants to buy three footballs and four cones for the football team.

a) Round the amounts and complete the bar model to estimate the total cost.



4 a) Write an estimate for each of the missing amounts.



b) Which amounts round to £12?

5 Eva buys a book for £4.85 and a pen for £2.70

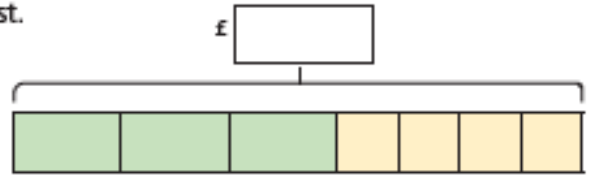
What would be a more accurate estimate for Eva to make?

Explain your answer.

6 A football costs £5.65 and cones cost £1.49 each.

Alex wants to buy three footballs and four cones for the football team.

a) Round the amounts and complete the bar model to estimate the total cost.



b) Alex has this much money.

Does Alex have enough money?

Talk about it with a partner.

7 Ron and Rosie have bought these items.

Ron

Rosie

Round each amount to find an approximate total.

Use <, > or = to compare Ron and Rosie's totals.

8 Filip is thinking of an amount of money.

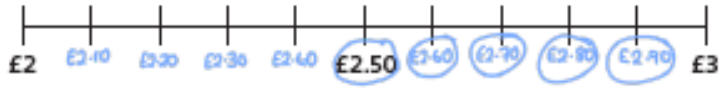
- The amount rounds to £22 to the nearest pound.
- In the pence, there is an even amount of ones and an odd amount of tens.
- In the pence, the tens digit is less than the ones digit.

What amounts could Filip be thinking of?

Compare answers with a partner.

Estimating money

1 a) Complete the number line.



b) Circle the amounts that round to £3

c) What do you notice about the amounts that round to £2 and the amounts that round to £3?

2 Here are some amounts of money.

£6.90	£6.20	£6.50	£6.05

a) Use the amounts to label the number line.

b) Sort the amounts into the table.

Rounds to £6	Rounds to £7
£6·05 £6·20	£6·50 £6·90

3 a) Draw arrows to estimate where each amount is on the number line.

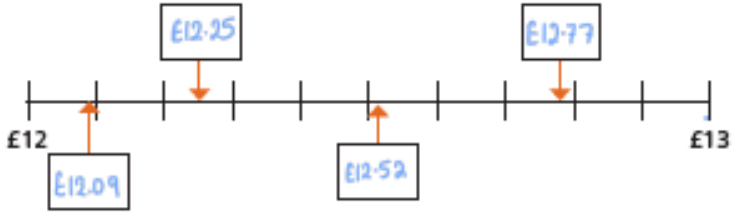
£8.60	£9.00	£8.45	£8.89

Which amounts were difficult to place on the number line?

b) Which amounts round to £9?

£8·60 £8·89

4 a) Write an estimate for each of the missing amounts.



b) Which amounts round to £12?

£12·52 £12·77

5 Eva buys a book for £4.85 and a pen for £2.70

The total will be approximately £6 because £4 plus £2 is £6

What would be a more accurate estimate for Eva to make?

£5 + £3 = £8

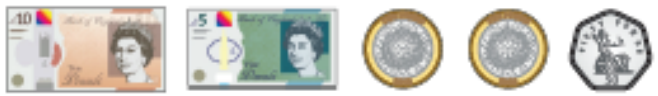
Explain your answer.

6 A football costs £5.65 and cones cost £1.49 each.

Alex wants to buy three footballs and four cones for the football team.

a) Round the amounts and complete the bar model to estimate the total cost.

b) Alex has this much money.



Does Alex have enough money?

Talk about it with a partner.

7 Ron and Rosie have bought these items.

Ron

Rosie

Round each amount to find an approximate total.

Write <, > or = to compare Ron and Rosie's totals.

Rosie's total		Ron's total
£24	<	£28

8 Filip is thinking of an amount of money.

- The amount rounds to £22 to the nearest pound.
- In the pence, there is an even amount of ones and an odd amount of tens.
- In the pence, the tens digit is less than the ones digit.

What amounts could Filip be thinking of?

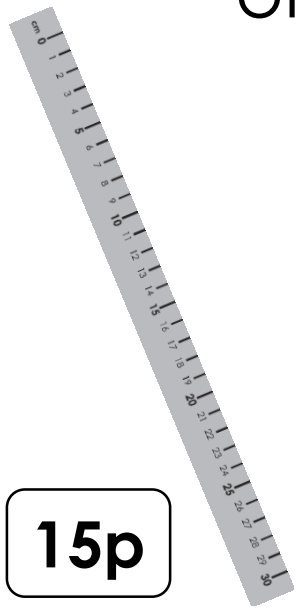
e.g. £21.78

Compare answers with a partner.

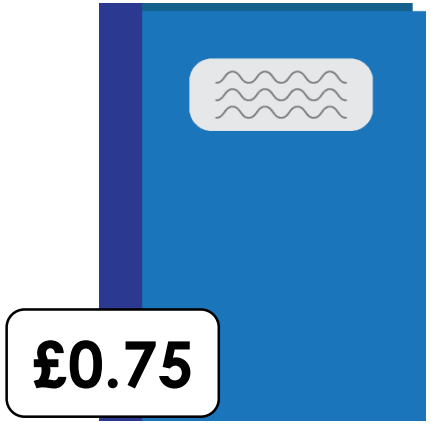
Challenge task

Class 4 has £50 to spend on equipment.

There are 28 children. Can they afford one of every item for each pupil?



15p



£0.75

42p

£0.60

07.05.20

LO: To able to solve money problems using all four operations.

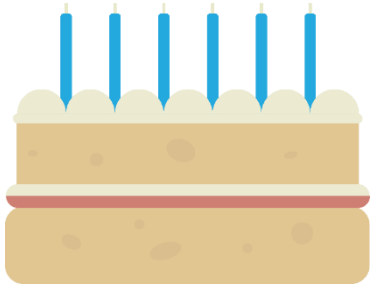
Success Criteria

- I can use the skills I have to solve simple money problems
- I can use rounding, portioning and bar models to help me

Unfortunately there are no White Rose videos available so please work through the powerpoint slides and then complete the worksheet in your book.

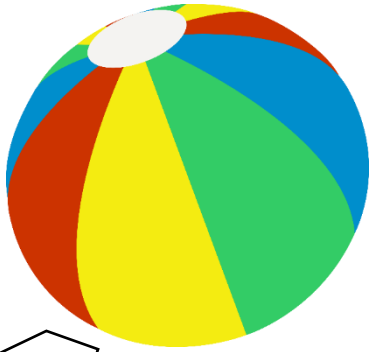
Let's do this!

Anita received £10 for her birthday.
She bought these items.



576p

£2.67



£0.98

Estimate how much money she has left.

Let's revisit what we should know

We look at the **value** of each digit when we work with money.

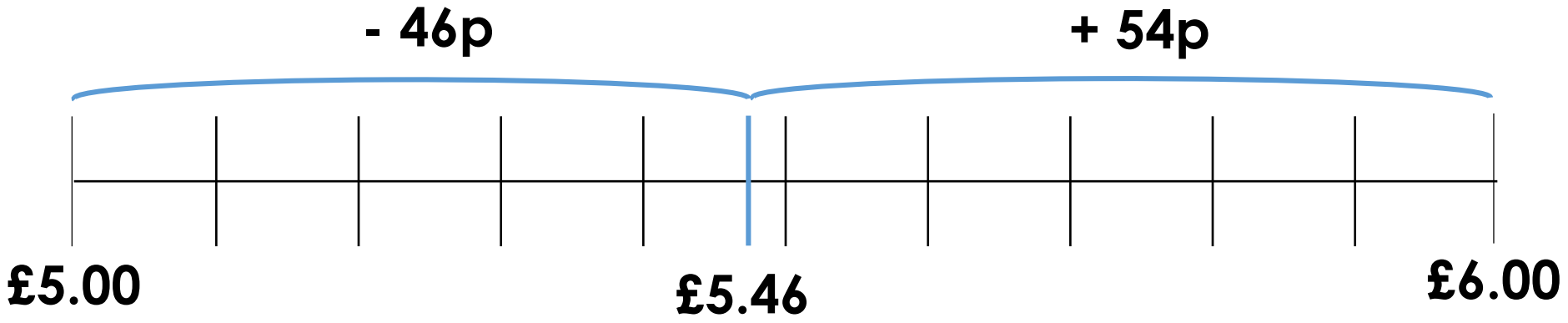
£45.78 £68.07

£__ __.__ __ has ____ pounds and ____p.

£__ __.__ __ has ____ pounds and ____p.

Let's revisit what we should know

When we estimate to the nearest pound,
we apply our knowledge of rounding.



£5.46 is **46p** away from £5.00 but **54p** away from £6.00

£5.46 rounds down to £5.00

Let's learn

Anita wants to buy lunch for her and Millie.
She has £15.
Can she afford two of each item?

We can use estimating or rounding to solve addition and subtraction questions.

Let's learn

Anita wants to buy lunch for her and Millie.
She has £15.
Can she afford two of each item?

99p is almost £1, £2.10 is nearly £2 and £2.75 is almost £3.

£1 + £2 + £3 = £6. £6 × 2 = £12.

Let's talk

Use rounding and estimation to solve this problem…

Anita and her family are going to the zoo on Saturday. There will be 2 adults, 1 senior and 3 children.

Approximately how much will the trip cost.

	Adult	Child	Senior
Mon - Fri	**£7.99**	**£5.75**	**£6.50**
Saturday	**£8.99**	**£6.75**	**£7.25**
Sunday	**£6.50**	**£4.99**	**£5.00**

Let's learn

What is the total cost of a doll and a teddy?

We can also use partitioning to calculate with money.

Let's learn

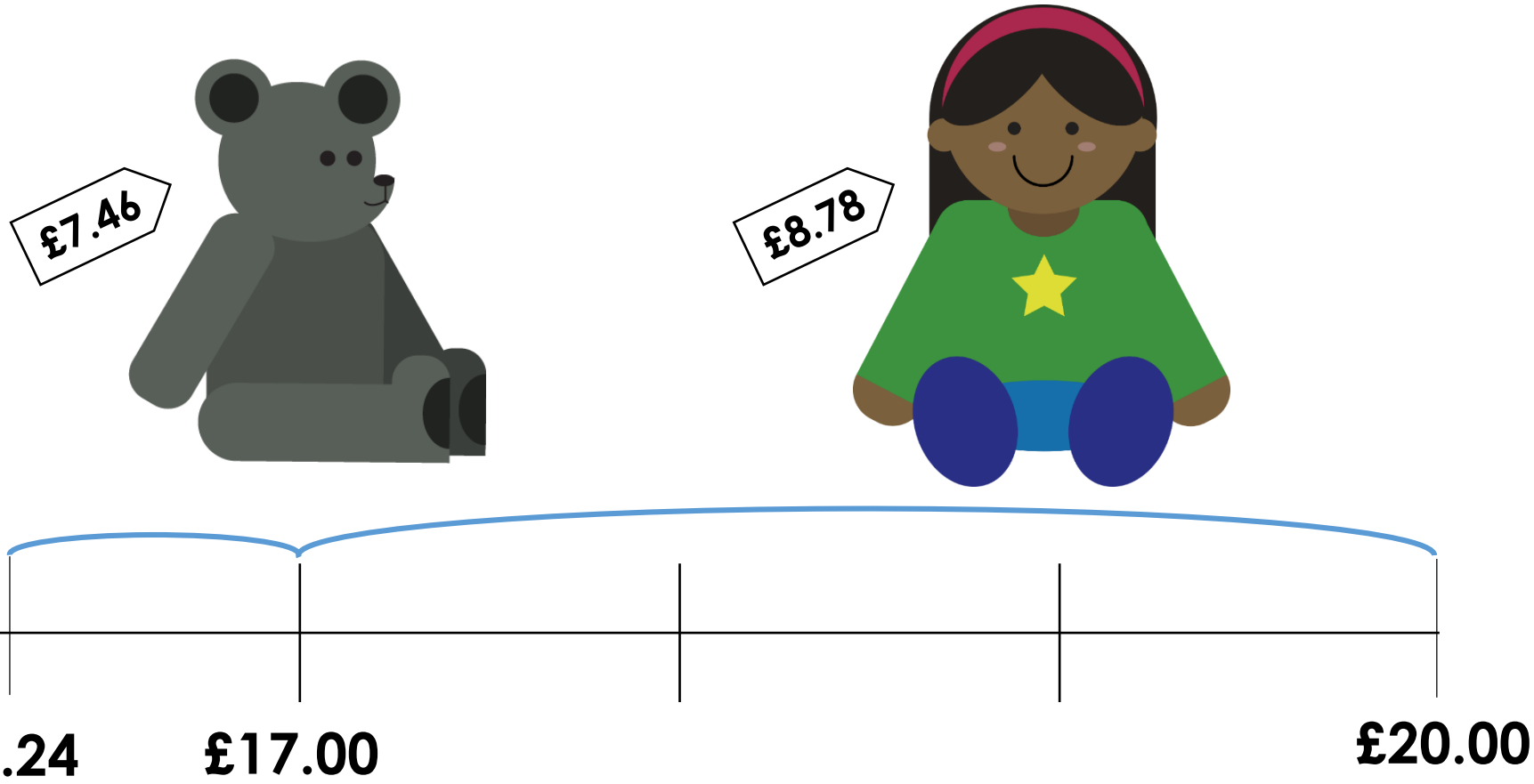
What is the total cost of a doll and a teddy?

£7 + £8 = £15. 40p + 70p = £1.10 6p + 8p = 14p

£15 + £1.10 + 14p = £16.24.

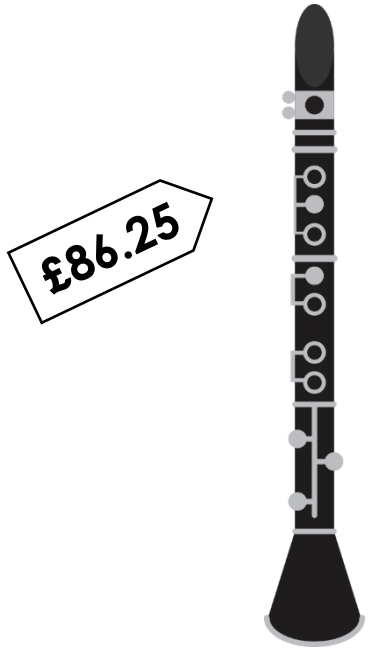
Let's learn

How much change from £20?



Let's talk

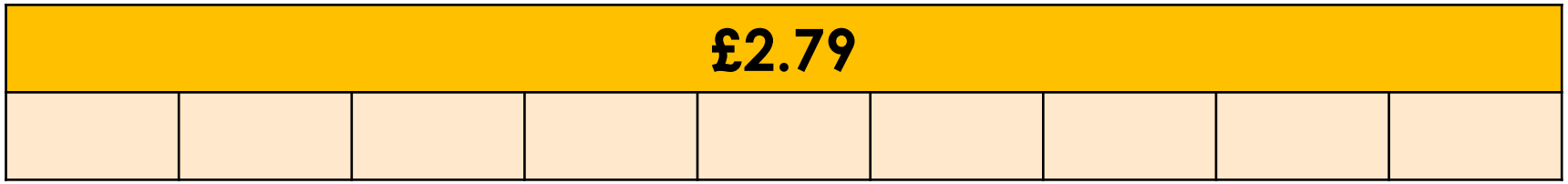
Use partitioning to find the total cost of all 3 instruments.



Let's develop our learning

We can use bar models to help with some problem solving.

If a packet of 9 balloons costs £2.79,
how much does a single balloon cost?



How will you work out the answer?

Let's develop our learning

We can use bar models to help with some problem solving.

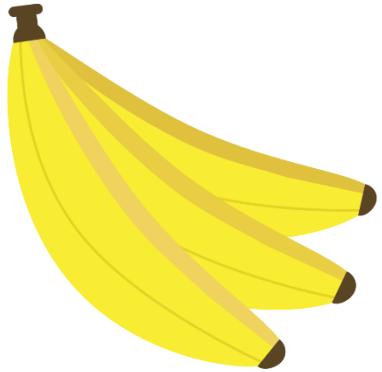
If a packet of 9 balloons costs £2.79,
how much does a single balloon cost?

£2.79								
31p	31p	31p	31p	31p	31p	31p	31p	31p

£2.70 ÷ 9 = 30p 9 ÷ 9 = 1p

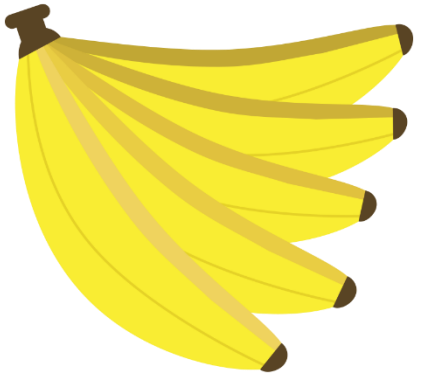
Let's talk

Use bar models to work out the cheapest single banana.



£2.25 per bunch

£3.12 per bunch



£3.60 per bunch

Can you work these out in your book?

YR4 PROGRESSION IN MASTERY LESSON PACK - FOUR OPERATIONS WITH MONEY

FLUENCY TASKS

FLUENCY 1

Use rounding and estimation to solve this problem.

Glue sticks cost 78p and pencils cost 19p each. Does Mr Birch, the head teacher, have enough to buy 301 of each with his budget of £300?

FLUENCY 2

Use partitioning to calculate the total cost of all four items.

£5.98 £1.76 £2.37 £81.75

£___ + £___ + £___ + £___ = £___

___p + ___p + ___p + ___p = £__.__

___p + ___p + ___p + ___p = ___p

£___ + £___.___ + ___p = £__.__

FLUENCY 3

Use a bar model to show the price of one apple.

£3.57

FLUENCY 4

Jane has £5. How much change will she receive if she buys a drink and a burger?

Use a number line to show your working.

What about these?

YR4 PROGRESSION IN MASTERY LESSON PACK - FOUR OPERATIONS WITH MONEY

REASONING TASKS

REASONING 1

Jerry has bought a chocolate bar costing £1.28 and a packet of crisps costing £1.46.

He calculates that he will get £3.26 change from £5.

What mistake has he made?

REASONING 2

Darcey has invited 4 friends for afternoon tea.

She thinks that she can buy a cupcake and a can of fizzy pop for everyone with £5.

Do you agree? Why/Why not?

REASONING 3

Convince Me!

The total of these 3 amounts is less than £10...

£5.56 £3.26 £1.37

How will you prove your answer?

REASONING 4

Anita has bought a packet of biscuits costing £1.86.

She divides them into 6 equal bags to sell at the tuck shop.

She thinks if she sells each bag for 35p, she will make a profit. Is she correct? Convince me!

If you have time, can you solve this?

YR4 PROGRESSION IN MASTERY LESSON PACK - FOUR OPERATIONS WITH MONEY

PROBLEM SOLVING TASKS

PROBLEM SOLVING 1

Millie needs to buy at least 2 of each item within her budget of £18.

How could she do it? Could she buy more of each item?

66p or 4 for £2.40

98p or 2 for £1.85

36p or 6 for £2

89p or 3 for £2.60

99p each

6 pack = £1.69

66p or 4 for £2.40

Bag of 6 = £1.29

85p per bunch

45p each or 4 for £1.75

6 for £1

48p or 6 for £2.80

Is there more than one solution?

Fluency 1

Mr Birch does have enough to buy 301 of each with his budget of £300. A glue stick and a pencil cost approximately £1 altogether so 301 of each would cost approximately £301. It would not be exactly £301 though so you would need to take into account the extra 3p added to each set. 3p x 301 is approximately £9 and £301 - £9 = £292 which is less than the £300 budget.

Fluency 2

£5 + £1 + £2 + £81 = £89

90p + 70p + 30p + 70p = £2.60

8p + 6p + 7p + 5p = 26p

£89 + £2.60 + 26p = £91.86

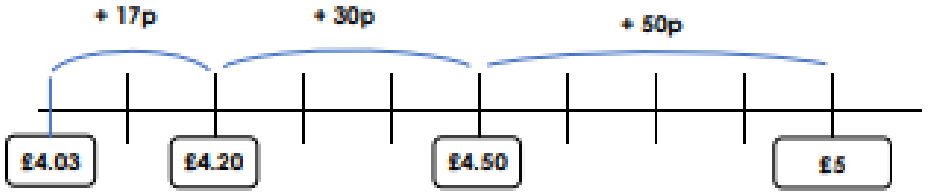
Fluency 3

The price of one apple is 51p (£3.57 ÷ 7 = 51p).

£3.57						
51p	51p	51p	51p	51p	51p	51p

Fluency 4

£1.35 + £2.68 = £1 + £2 = £3 + 60p + 30p = £3.90 + 8p + 5p = £4.03 = 97p change from £5.



Reasoning 1

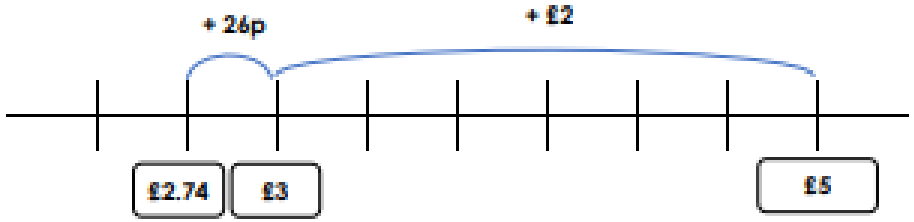
Modelled DAB Reasoning Responses

D – Jerry has made a mistake.

A – He has calculated his change incorrectly.

B – Jerry has not counted on correctly - £1.28 + £1.46 = £2.74.

The correct change is £2.26 not £3.26 as shown here.



Reasoning 2

Modelled DAB Reasoning Response

D – I disagree with Darcey.

A – She cannot buy everyone a cupcake and a can of fizzy pop with £5.

B – 65p + 42p = £1.07. Darcey has 5 people to buy for – herself and 4 friends – so the total would be 4 x £1.07 which = £5.28

Reasoning 3

Modelled DAB Reasoning Response

D – The statement is wrong.

A – The total of the 3 amounts is not less than £10.

B – £5 + £3 + £1 = £9 and 50p + 20p + 30p = £1 so the total must be greater than £10 because there is still the pennies to add.

Reasoning 4

Modelled DAB Reasoning Response

D – Anita is correct.

A – If she sells the 6 bags of biscuits for 35p she will make a profit.

B – £1.86 ÷ 6 = 31p

£1.86					
31p	31p	31p	31p	31p	31p

If Anita sells each bag for 35p, she will make a 4p profit on each bag. 4 x 6 = 24 so she will make a 24p profit altogether.

Download our 'DAB' posters to support reasoning in your classroom:

https://www.deepeningunderstanding.co.uk/product/dab-reasoning-posters/

Problem Solving 1

If Millie buys two of each item that can be sold separately, the total is £10.94.

If she then adds the multi-packs (crisps, apples, carrots and fresh tomatoes), the total will be £15.77.

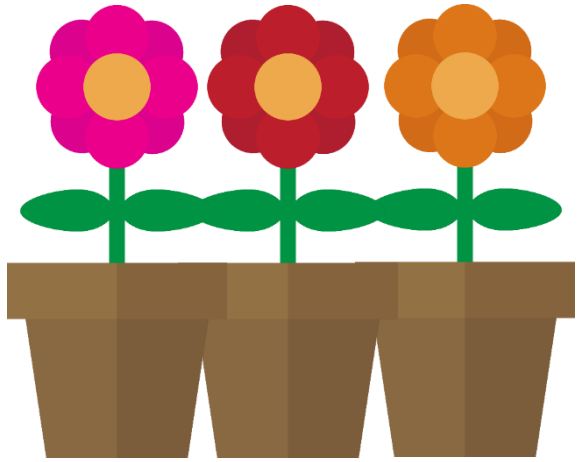
She could then think about swapping some of her single items for multipacks as she has £2.23 left to spend.

Pupils should be encouraged to explore various options – for example, swapping 2 tins of beans for a multi-pack will bring the total to £16.85.

Challenge task

Anita spends approximately £10 on plants.

35p each
4 for £1.20



£1.75 each
2 for £3.40

£2.29 each
3 for £6.50

What combination could she have bought?