WEEK 3 – LESSON 2

Learning Question:

How can I estimate money?

Success Criteria:

- Use knowledge of rounding to create a whole number.
- Know that numbers £0.50 - £0.99 round upwards.
- Know that numbers £0.49 and below round downwards.
- Can make sensible estimates to solve problems.

Vocabulary

- Pound
- Pence
- Estimate
- Round

Match the value to the correct coin or note.

£0.01
1p

£0.02
2p

£0.05
5p

£0.10
10p

£0.20
20p

£0.50
50p

£1.00
100p

£2.00
200p

£5.00
500p

£10.00
1000p

£20.00
2000p

£50.00
5000p

We use decimals all the time when talking about money.
The decimal point separates the pounds from the pence.

We can write money in different ways:

£10.55

Ten pounds and fifty five pence

1055p

To identify what the numbers after the decimal point mean remember that:

100 x 1p pieces = £1
10 x 10p pieces = £1

The first number after the decimal point means **tenths**.

So a digit in this position represents the number of **ten pence pieces**.

The second number after the decimal point means **hundredths**.

So a digit in this position represents the number of one **pence pieces**.

Amount : £10.55

T	O	.	th	hth
1	0	.	5	5

Amount : £0.24

T	O	.	th	hth
0	0	.	2	4

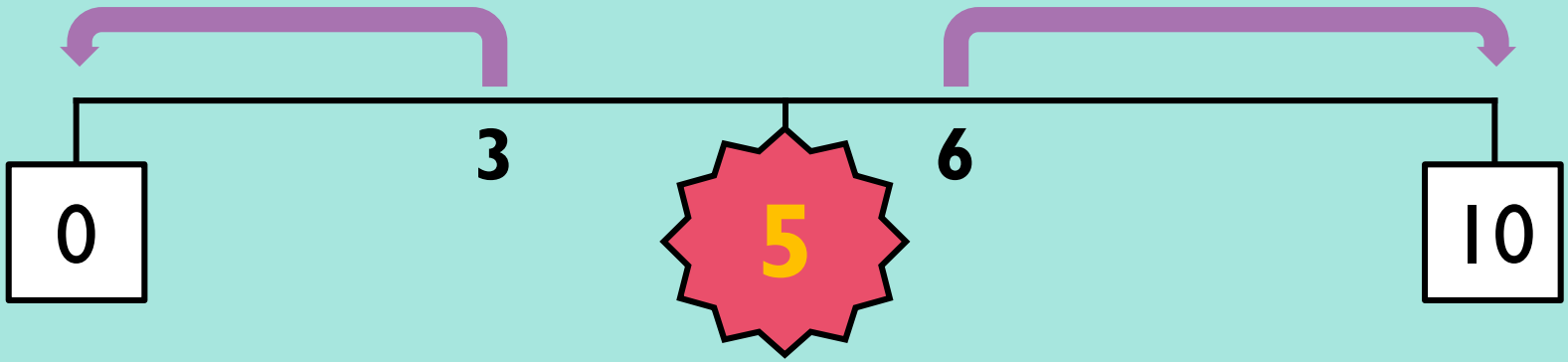
Things to remember when working with money.

- Don't forget to use zero as a place holder; eg: one pound five pence = £1.05.
- When writing amounts of money always write two digits after the decimal point.
  Three pounds and fifty pence is written as £3.50 not £3.5.
- Never have £ and p signs together.
  £5.55p ☹
- Whole amounts can be written as £8 or £8.00

Rounding

When we are rounding numbers to the nearest 10, how do we know whether to round up or down?

5 is the golden number.



If the ones digit is less than 5, we round down.

If the ones digit is 5 or greater, we round up.

Rounding

For each number, we have to identify the multiples of £10 below and above it.
If we are rounding £32 to the nearest £10, what would the multiples of £10 above and below it be?

What would the golden number be?

Where would £32 be on the number line?

What is £32 rounded to the nearest £10?

£32 rounded to the nearest £10 is £30.

Rounding

What is £8 rounded to the nearest £10?

£0

£5

£10

How did you do?

What is £8 rounded to the nearest £10?

Rounding

What is £24 rounded to the nearest £10?

£20

£30

How did you do?

What is £24 rounded to the nearest £10?

Rounding

What is 65 rounded to the nearest 10?

£60

£70

How did you do?

What is 65 rounded to the nearest 10?

Rounding To Whole Numbers

When we round numbers with one decimal place, £0.50 is still the golden number but now we look at the tenths digit instead of the ones.

Where would £0.70 be on the number line?

£0.70 rounded to the nearest whole number is £1.

Rounding To Whole Numbers

For each number, we have to identify the integers below and above it. If we are rounding 2.70 to the nearest whole number, what would the integers above and below it be?

What would the golden number be?
Where would £2.70 be on the number line?
What is £2.70 rounded to the nearest whole number?
£2.70 rounded to the nearest whole number is £3.

Rounding To Whole Numbers

What is £0.50 rounded to the nearest whole number?

£0

£1

How did you do?

What is £0.50 rounded to the nearest whole number?

£0

£0

£1

Rounding To Whole Numbers

What is £6.40 rounded to the nearest whole number?

£6

£7

How did you do?

What is £6.40 rounded to the nearest whole number?

£6

£6

£7

Rounding To Whole Numbers

What is £45.10 rounded to the nearest whole number?

£45

£46

How did you do?

What is £45.10 rounded to the nearest whole number?

£45

£45

£46

Estimating

We can use rounding to estimate how much two things added together will cost.

Round the amounts to the nearest whole pound to estimate the total.

Match each number to it's estimated total.

£1.70 + £1.10 =	£6
£5.20 + £1.90 =	£5
£3.50 + £1.40 =	£3
£2.05 + £3.55 =	£7

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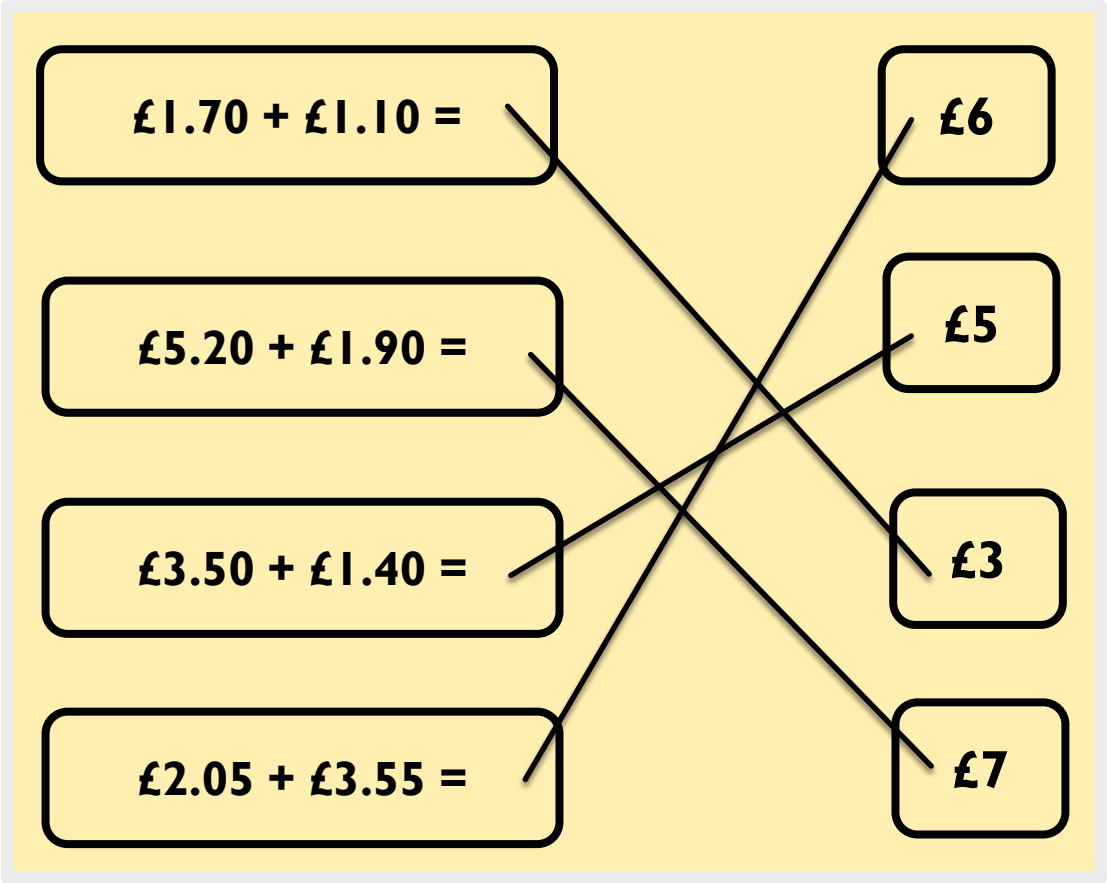


Hard		
Round to the nearest whole pound and match each number to the estimated total.		
£1.75 + £3.31		£10
£2.24 + £0.89		£6
£1.01 + £1.35		£5
£6.34 + £5.76		£8
£1.93 + £3.71		£15
£8.45 + £8.01		£9
£8.45 + £7.12		£4
£0.23 + £0.55		£1
£5.02 + £3.36		£12
£12.56 + £0.87		£14
£4.24 + £6.91		£16
£0.89 + £3.15		£2
£0.99 + £8.24		£3
£5.23 + £5.34		£11

HARDER

1) a) Show the cost of these items on the number line and round each amount to the nearest pound.

£ _____

£ _____

£2 £2.50 £3

£ _____

£ _____

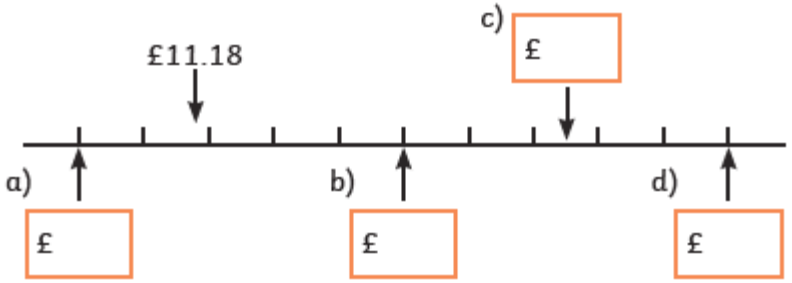
£5 £5.50 £6

b) Find the approximate cost of:

and

and

2) Complete the number line with the missing values.



3) George saves some of his pocket money each week for a whole month and writes it down.

a) Complete the table to show the missing values.

	Actual Amount Saved	Amount Saved When Rounded to the Nearest Pound
Week 1	£1.47	
Week 2	£2.54	
Week 3		£2
Week 4		£4

b) If George saves approximately the same amount next month, will he have enough to buy a new bike for £30? Explain your answer.

HARDEST

1) Morgan and Eva's mum asks them to estimate how much change she will get if she pays for her shopping with a £20 note.

Morgan says, "I estimate Mum should get approximately £7 in change."

Eva says, "I think Mum's change will be closer to £8."

Who is correct? Explain your answer.

2) **a)** Correct any mistakes by drawing new arrows to show the numbers on the correct place on the number line.

b) Which of these amounts will round to £6 to the nearest pound?

3) Aneesha has five purses with different amounts of money in each.

Decide if each statement is true or false. Explain your answers.

a) When rounded to the nearest pound, only purses A and D round to £11.

b) When rounded to the nearest pound, the approximate total of purses B and E is £20.

c) Aneesha can pay for her £55 shopping using the approximate total of the money in the five purses.

HERCULEAN

1) Lily buys the same sandwich every day in her local shop.

Lily estimates that she has spent £24 on sandwiches.

a) Round the price of the sandwich to estimate how many days Lily bought this sandwich.

b) Estimate how much Lily would spend if she bought the same sandwich every day for 3 weeks.

2)

a) I have £2. Which item could I buy that is worth approximately £2, but would give me change?

b) Nizar buys two of each item. Estimate how much change he will have from a £20 note.

c) Jessica wants to buy approximately £10 worth of fruit. She wants at least three different types of fruit. Find one possible combination of fruit that she could buy.

For example, she could buy 5 mangoes, 1 bunch of bananas and 1 box of strawberries.

3) These toys cost less than £15 to buy altogether.

Fatimah buys three of the toys and spends approximately £13.

Noah buys the cheapest toy and spends approximately £2.

Grace buys two of the toys and spends approximately £8.

a) Estimate how much each toy could cost and write your answer down.

b) Use your answers from (a) to explain which of the toys each child bought.

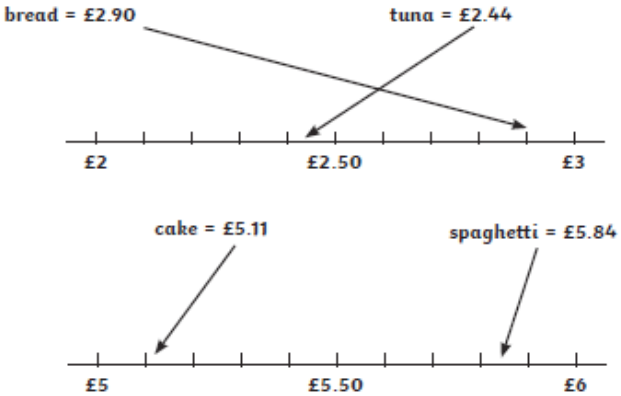
ANSWERS

HARD

£1.75 + £3.31 = £5
£2.24 + £0.89 = £3
£1.01 + £1.35 = £2
£6.34 + £5.76 = £12
£1.93 + £3.71 = £6
£8.45 + £8.01 = £16
£8.45 + £7.12 = £15
£0.23 + £0.55 = £1
£5.02 + £3.36 = £8
£12.56 + £0.87 = £14
£4.24 + £6.91 = £11
£0.89 + £3.15 = £4
£0.99 + £8.24 = £9
£5.23 + £5.34 = £10

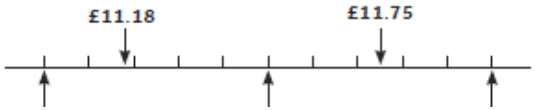
HARDER

1) a) bread = £3
tuna = £2
cake = £5
spaghetti = £6



b) bread and tuna = £5
cake and spaghetti = £11

2)



3) a)

	Actual Amount Saved	Amount Saved When Rounded to the Nearest Pound
Week 1	£1.47	£1
Week 2	£2.54	£3
Week 3	amount given that rounds to £2	£2
Week 4	amount given that rounds to £4	£4

b) George will not have enough. If he saves approximately the same amount next month, he will only have saved approximately £20.

1) Morgan is correct. The approximate cost of the items rounded to the nearest pound is £13 and therefore Mum's change would be approximately £7.

2) a)

b) £6.25 and £6.05

3) a) False. Purses A, B and D each round to £11.

b) True. B rounds to £11 and E rounds to £9, and £11 + £9 = £20.

c) False. The approximate total in all the purses put together is £52, which would not be enough.

HARDEST

1) a) £2.74 rounds to £3. £27 ÷ 3 = 8
Lily has bought the same sandwich for 8 days.

b) 3 × 7 = 21 days
21 × £3 = £63

2) a) pineapple

b) The approximate total for two of each item is £18. The change for this from a £20 note would be £2.

c) Answers will vary. Accept any answer where the approximate costs add up to £10. Example answers:

- 2 boxes of strawberries, 1 pineapple, 1 bag of bananas
- 5 mangos, 1 pineapple, 1 box of strawberries

3) a) Answers will vary, but should meet the criteria given by all three of the statements about Fatimah, Noah and Grace and have a total of less than £15. It does not matter which price is given to which toy. For example:

Toy 1 = £4.10

Toy 2 = £4.20

Toy 3 = £5.10

Toy 4 = £1.55

Total = £14.95

b) Answers will vary.

Example answer based on prices given in (a):

Fatimah bought toys 1, 2 and 3.

Noah bought toy 4 .

Grace bought toys 1 and 2.

HERCULEAN