

Estimate answers

1 Filip is working out $607 + 395$

He rounds his numbers to the nearest hundred to estimate the answer.

a) Complete the sentences.

607 rounded to the nearest hundred is

395 rounded to the nearest hundred is

Filip's estimate for the answer is

$$\boxed{600} + \boxed{400} = \boxed{1,000}$$

b) Use column addition to work out the actual answer.

	Th	H	T	O
		6	0	7
+		3	9	5
	1	0	0	2
	1	1	1	

The actual answer is

2 Alex is working out $7,958 - 6,103$

Alex rounds her numbers to the nearest thousand to estimate the answer.

a) Complete the sentences.

7,958 rounded to the nearest thousand is

6,103 rounded to the nearest thousand is

Alex's estimate is

$$\boxed{8,000} - \boxed{6,000} = \boxed{2,000}$$

b) Use column subtraction to work out the actual answer.

	Th	H	T	O
	7	9	5	8
-	6	1	0	3
	1	8	5	5

The actual answer is

3 Mr Howell writes a subtraction on the board.

$$\boxed{795 - 503}$$

I estimate the answer will be close to 200 because $700 - 500 = 200$



What mistake has Dora made?

Write a better estimate.

795 rounds to 800 not 700

$$800 - 500 = 300$$

4 a) Tom is estimating an addition calculation.

His estimate is $3,000 + 1,000 = 4,000$

Write three possible additions Tom could be estimating.

E.g.

$$\boxed{2,999} + \boxed{999} = \boxed{3,998}$$

$$\boxed{3,076} + \boxed{1,200} = \boxed{4,276}$$

$$\boxed{2,621} + \boxed{1,334} = \boxed{3,955}$$

b) Dani is estimating a subtraction calculation.

Her estimate is $\pounds 600 - \pounds 100 = \pounds 500$

Write three possible subtractions Dani could be estimating.

E.g.

$\pounds 601$	-	$\pounds 107$	=	$\pounds 494$
$\pounds 649$	-	$\pounds 130$	=	$\pounds 519$
$\pounds 550$	-	$\pounds 72$	=	$\pounds 478$

5 Complete the table. Show your workings.

Question	Estimated answer	Accurate answer
$3,970 \text{ km} - 1,850 \text{ km}$	$2,000 \text{ km}$	$2,120 \text{ km}$
$7,076 - 852$	$6,000$	$6,224$
$7,076 - 652$	$6,000$	$6,424$
$1,994 \text{ ml} + 1,994 \text{ ml}$	$4,000 \text{ ml}$	$3,988 \text{ ml}$

6 Whitney and Dexter are estimating the answer to $2,706 - 1,394$

Whitney's estimate is $3,000 - 1,000 = 2,000$

Dexter's estimate is $2,700 - 1,400 = 1,300$

Whose estimate is more accurate? Why?

Dexter's because he has rounded to the nearest
100

7 A forest has 2,638 trees.



1,172 more trees are planted.

a) Use rounding to estimate the number of trees in the forest now.

$3,800$

b) Work out the actual number of trees in the forest.

$3,810$

c) How accurate was your estimate?



Checking strategies

1 Circle the subtractions that can be used to check the addition $271 + 516 = 787$

$787 - 271$ $516 - 271$ $271 - 787$ $787 - 516$

2 Circle the additions that can be used to check the subtraction $2,364 - 1,202 = 1,162$

$2,364 + 1,202$ $1,162 + 1,202$ $2,364 + 1,162$ $1,202 + 1,162$

3 Use an inverse operation to check these calculations.

a)

		H	T	O
		3	7	1
	+	4	6	5
		8	3	6

		3	3	6			
		-	3	7	1		
			4	6	5		

b)

		H	T	O
		5	6	7
	-	1	5	2
		4	1	5

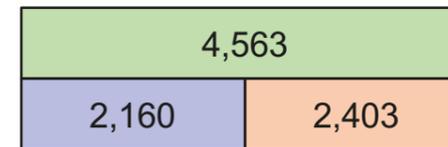
		4	1	5			
		+	1	5	2		
			5	6	7		

c)

		Th	H	T	O
		2	4	1	1
	-	1	3	0	6
		1	1	0	5

		1	1	0	5		
		+	1	3	0	6	
			2	4	1	1	

4 Complete the fact family for the bar model.



$2,160 + 2,403 = 4,563$

$2,403 + 2,160 = 4,563$

$4,563 - 2,403 = 2,160$

$4,563 - 2,160 = 2,403$

5 Teddy is working out $5,671 + 325$

		Th	H	T	O
		5	6	7	1
	+	3	2	5	
		8	9	2	1

		5	6	7	1		
		+	3	2	5		
			5	9	9	6	

Teddy checks his calculation using the same addition.

Is this a good idea? What mistake has Teddy made?

What addition should he do? Check Teddy's calculation.



Estimating money

1 a) Complete the number line.

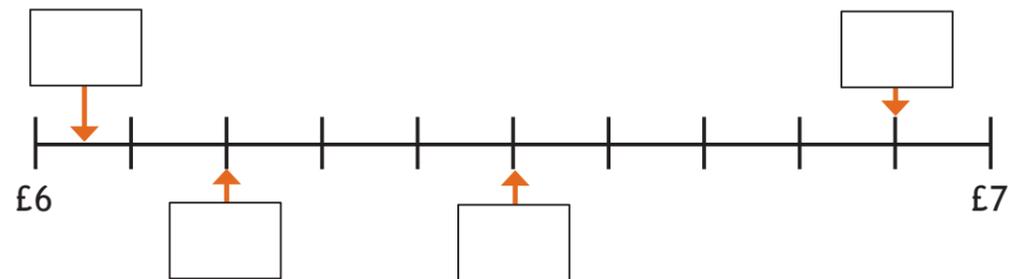


- b) Circle the amounts that round to £3
- c) What do you notice about the amounts that round to £2 and the amounts that round to £3?

2 Here are some amounts of money.



a) Use the amounts to label the number line.

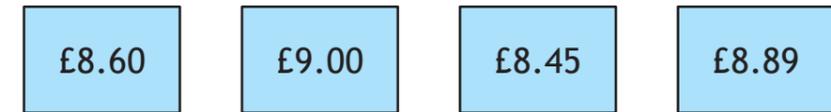


b) Sort the amounts into the table.

Rounds to £6	Rounds to £7



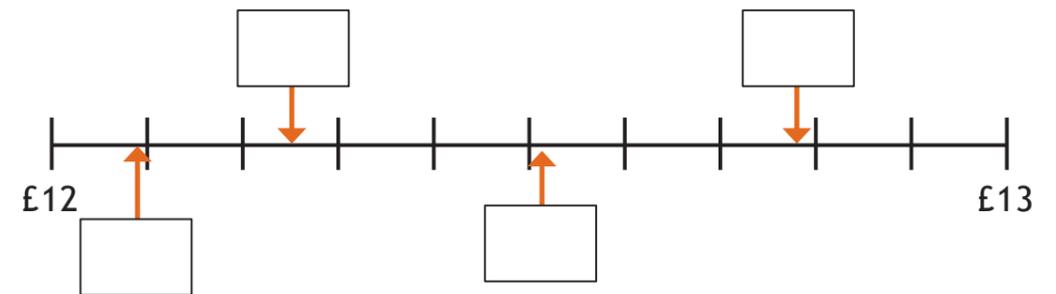
3 a) Draw arrows to estimate where each amount is on the number line.



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



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

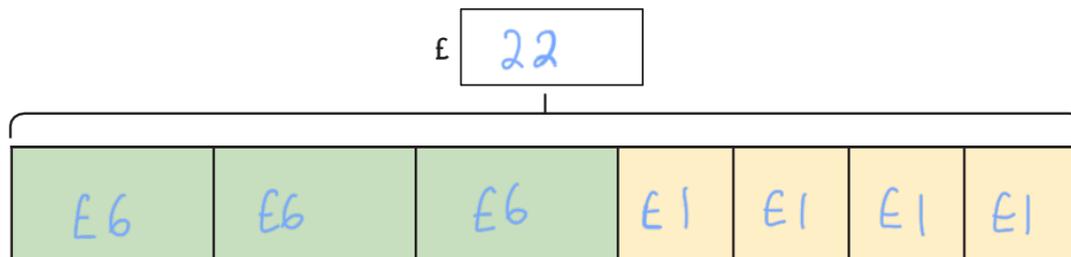
$$£5 + £3 = £8$$

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.

Ron and Rosie have bought these items.

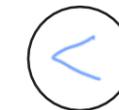


Round each amount to find an approximate total.

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

Rosie's total

£24



Ron's total

£27

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.



Four operations

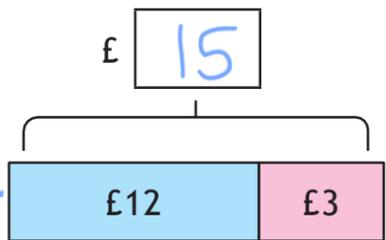
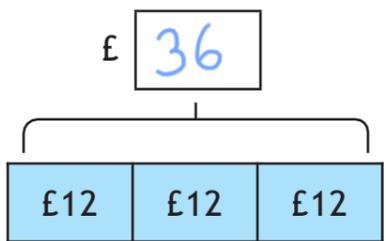
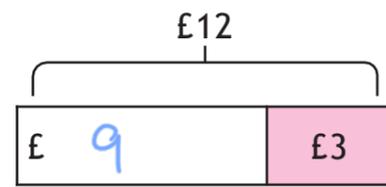
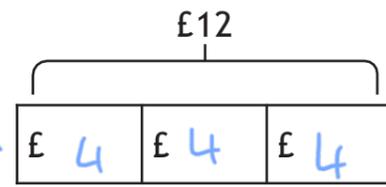
1 a) Match the problems to the bar models.

Nijah has £12. Her mum gives her £3 more. How much does she have now?

Nijah has £12. She buys a book for £3. How much does she have now?

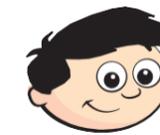
Nijah has £12. She shares it between 3 of her friends. How much does each friend get?

Nijah has £12. Her friend has 3 times as much. How much does her friend have?



b) Complete the bar models.

2 A child's ticket to the cinema costs £4.50 and an adult's ticket costs £7.95. Dexter wants to know how much more an adult's ticket costs than a child's ticket.



I just need to add £7.95 to £4.50 to find out how much more.

Do you agree with Dexter? No

Explain your answer.

3 Whitney is finding the total of £23.70 and £34.40



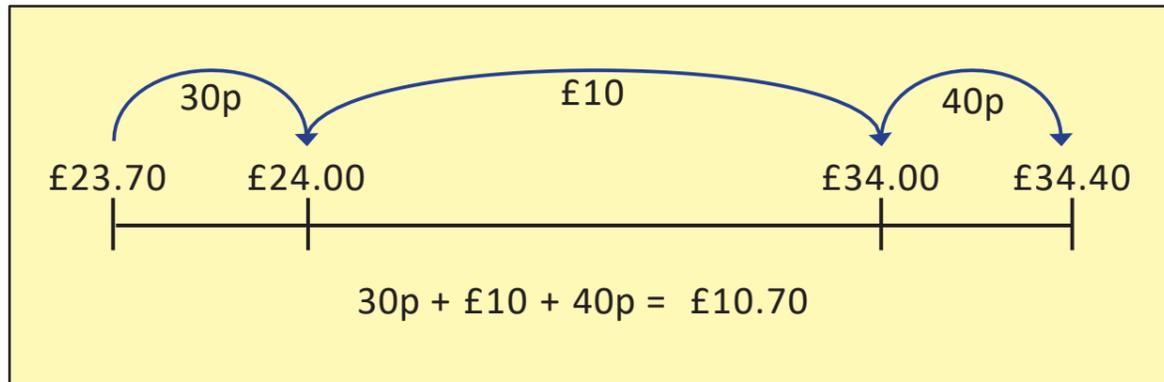
I can add £23 and £34 together to give £57 and add 70p and 40p together to give £1.10 and then combine the two parts. So the total is £58.10

Use Whitney's method to complete the additions.

a) $£8.60 + £7.80 =$ £16.40

b) $£11.80 + £9.25 =$ £21.05

- 4 Teddy uses a number line to find the difference between £23.70 and £34.40



Use Teddy's method to help you complete the sentences.

- a) The difference between £17.30 and £32.45 is

- b) The difference between £42.11 and £22.65 is

- 5 A shop sells these items.



- a) Scott buys some marbles, a book and a cap.

He pays with a £20 note.

How much change does he get?

£ © White Rose Maths 2020

- b) Esther buys three sets of headphones.

She has a voucher for £5 off the total.

How much does Esther need to pay?

£

- c) Dani buys a cap and some marbles.

Tom buys a book.

How much more does Dani spend than Tom?

£

- 6 The board shows the cost of different rides at a theme park. Some of the prices are missing.

Use the clues to work out the missing prices.

- Frenzy costs one quarter of the price of Galaxy.
- Speedster costs double the price of Up 'n' Down.
- The combined cost of Galaxy and Up 'n' Down is £17.20

Up 'n' Down	£	<input type="text" value="4.40"/>
Speedster	£	<input type="text" value="8.80"/>
Galaxy	£	12.80
Frenzy	£	<input type="text" value="3.20"/>

