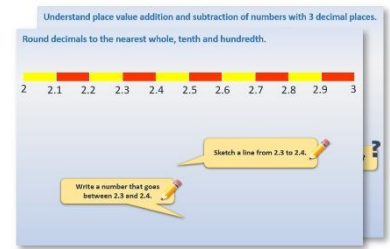


Year 4: Week 2, Day 2

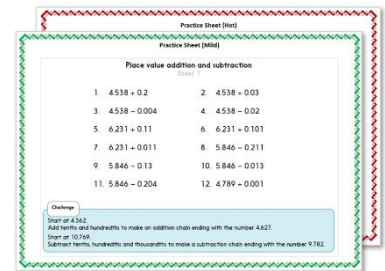
Adding money

Each day covers one maths topic. It should take you about 1 hour or just a little more.

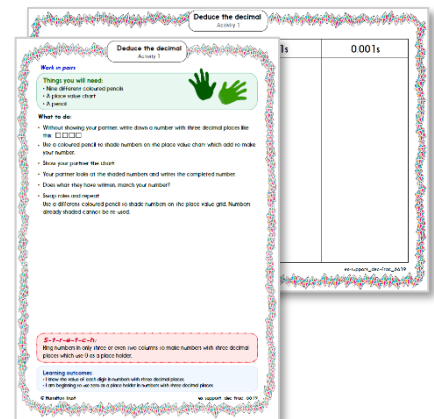
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**



4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!

Identify the value of the '4' in the following numbers:

- (a) 3.407
- (b) 4.821
- (c) 0.043
- (d) 5.104
- (e) 48,739

How many times must Dan multiply 0.048 by 10 to get 48,000?

What number is one hundred times smaller than 0.4?

Learning Reminders

Add amounts of money using expanded addition.

We can use **expanded addition** to add £3.24 and £2.58.

Partition the amounts into £s, 10ps and 1ps. Line the columns up neatly and don't forget a **blank 'waiting line'** under the second number.

Add the 1ps. $4p + 8p = 12p$. We put 10p under the 10ps in the **waiting line** and 2p under the 1ps in the **answer line**.

$$\begin{array}{r} \text{£}3 \quad 20\text{p} \quad 4\text{p} \\ + \quad \text{£}2 \quad 50\text{p} \quad 8\text{p} \\ \hline \quad \quad \text{10p} \\ \hline \text{£}5 \quad 80\text{p} \quad 2\text{p} \end{array}$$

$$\text{£}5 + 80\text{p} + 2\text{p} = \text{£}5.82$$

Next add the 10ps.
 $20\text{p} + 50\text{p} + 10\text{p} = ?$

Then the £s.
 $\text{£}3 + \text{£}2 = ?$

Finally **recombine** the pounds and pence.

Learning Reminders

Add amounts of money using expanded and compact addition.

Try adding 324 and 258 using **compact addition**.



$$\begin{array}{r} 324 \\ + 258 \\ \hline 582 \end{array}$$

Let's check through that...

1s

10s

100s

We can add £3.24 and £2.58 in the same way, without partitioning the amounts...!

$$\begin{array}{r} \text{£}3.24 \\ + \text{£}2.58 \\ \hline \text{£}5.82 \end{array}$$

Learning Reminders

Add amounts of money using compact addition.

Work out $374 + 283$ using compact addition.



We can add $£3.74$ and $£2.83$ in the same way.

Let's check through...

What happened when we added 70 and 80?

$$\begin{array}{r} 374 \\ + 283 \\ \hline 1 \\ \hline 657 \end{array}$$

$$\begin{array}{r} £3.74 \\ + £2.83 \\ \hline 1 \\ \hline £6.57 \end{array}$$

The 70p and 80p make $£1.50$. 5 goes under the 10ps and the $£1$ under the pounds.

Practice Sheet Mild

Missing number additions

Fill in the missing numbers:

$$\begin{array}{r}
 1. \quad \text{£}1.00 \quad 20\text{p} \quad \square \\
 + \text{£}2.00 \quad 30\text{p} \quad \square \\
 \hline
 \text{£}3.00 \quad \square \quad 8\text{p}
 \end{array}$$

$$\begin{array}{r}
 2. \quad \text{£}3.00 \quad \square \quad 5\text{p} \\
 + \text{£}2.00 \quad \square \quad 1\text{p} \\
 \hline
 \text{£}5.00 \quad 20\text{p} \quad \square
 \end{array}$$

$$\begin{array}{r}
 3. \quad \text{£}1.00 \quad 20\text{p} \quad \square \\
 + \text{£}3.00 \quad 20\text{p} \quad \square \\
 \hline
 \text{£}4.00 \quad \square \quad 7\text{p}
 \end{array}$$

$$\begin{array}{r}
 4. \quad \text{£}3.00 \quad 20\text{p} \quad \square \\
 + \text{£}1.00 \quad 50\text{p} \quad \square \\
 \quad \quad \quad 10\text{p} \\
 \hline
 \text{£}4.00 \quad \square \quad 1\text{p}
 \end{array}$$

$$\begin{array}{r}
 5. \quad \text{£}3.\square 2 \\
 + \text{£}2.\square 6 \\
 \quad \quad \quad 1 \\
 \hline
 \text{£}6. 2 \square
 \end{array}$$

$$\begin{array}{r}
 6. \quad \text{£}4. 3 \square \\
 + \text{£}2. 2 \square \\
 \quad \quad \quad 1 \\
 \hline
 \text{£}6.\square \square
 \end{array}$$

$$\begin{array}{r}
 7. \quad \text{£}3.\square 5 \\
 + \text{£}2.\square 1 \\
 \quad \quad \quad 1 \\
 \hline
 \text{£}6. 3 \square
 \end{array}$$

$$\begin{array}{r}
 8. \quad \text{£}4. 1 \square \\
 + \text{£}3. 2 \square \\
 \quad \quad \quad 1 \\
 \hline
 \text{£}7.\square 4
 \end{array}$$

$$\begin{array}{r}
 9. \quad \text{£}4.\square 1 \\
 + \text{£}1.\square 4 \\
 \quad \quad \quad 1 \\
 \hline
 \text{£}6. 1 \square
 \end{array}$$

Challenge

Choose three amounts and add them. Repeat this twice.

What is the largest total possible? And the smallest? How close can you get to £90?

£14.76 £27.76 £56.92
 £25.38 £30.55

Practice Sheet (hot)

Adding money

Part 1

Use expanded or compact addition to answer these additions:

$$452 + 583$$

$$£4.52 + £5.83$$

$$465 + 387$$

$$£4.65 + £3.87$$

$$368 + 457$$

$$£3.68 + £4.57$$

Part 2

Use expanded addition and then compact addition to answer these additions:

$$£6.54 + £3.65$$

$$£2.81 + £6.65$$

$$£5.48 + £4.78$$

Part 3

Use compact addition to answer these additions:

$$£4.75 + £1.82 + £2.37$$

$$£7.42 + £7.56 + £8.54$$

$$£8.57 + £6.79 + £1.65$$

Challenge

Write 2 amounts that add to exactly £12.34.

BUT the 1ps must add to more than 10p and the 10ps must add to more than £1.

Further challenge

Write three amounts that add to exactly £12.34 – same rules as above!

Practice Sheet Answers

Missing number additions (mild)

(for some other correct answers are possible, these are examples)

$$\begin{array}{r} 1. \quad \text{£1.00 } 20\text{p } 4\text{p} \\ + \text{£2.00 } 30\text{p } 4\text{p} \\ \hline \end{array}$$

$$\text{£3.00 } 50\text{p } 8\text{p}$$

$$\begin{array}{r} 2. \quad \text{£3.00 } 10\text{p } 5\text{p} \\ + \text{£2.00 } 10\text{p } 1\text{p} \\ \hline \end{array}$$

$$\text{£5.00 } 20\text{p } 6\text{p}$$

$$\begin{array}{r} 3. \quad \text{£1.00 } 20\text{p } 4\text{p} \\ + \text{£3.00 } 20\text{p } 3\text{p} \\ \hline \end{array}$$

$$\text{£4.00 } 40\text{p } 7\text{p}$$

$$\begin{array}{r} 4. \quad \text{£3.00 } 20\text{p } 9\text{p} \\ + \text{£1.00 } 50\text{p } 2\text{p} \\ \hline \end{array}$$

$$\text{£4.00 } 80\text{p } 1\text{p}$$

$$\begin{array}{r} 5. \quad \text{£3.82} \\ + \text{£2.46} \\ \hline \end{array}$$

$$\text{£6.28}$$

$$\begin{array}{r} 6. \quad \text{£4.37} \\ + \text{£2.28} \\ \hline \end{array}$$

$$\text{£6.65}$$

$$\begin{array}{r} 7. \quad \text{£3.95} \\ + \text{£2.41} \\ \hline \end{array}$$

$$\text{£6.36}$$

$$\begin{array}{r} 8. \quad \text{£4.18} \\ + \text{£3.26} \\ \hline \end{array}$$

$$\text{£7.44}$$

$$\begin{array}{r} 9. \quad \text{£4.21} \\ + \text{£1.94} \\ \hline \end{array}$$

$$\text{£6.15}$$

Challenge

$\text{£56.92} + \text{£30.55} + \text{£27.76} = \text{£115.23}$ (largest)

$\text{£14.76} + \text{£25.38} + \text{£27.76} = \text{£67.90}$ (smallest)

Closest total to £90 is £83.69 ($\text{£27.76} + \text{£25.38} + \text{£30.55}$)

Adding money (hot)

Part 1

$$452 + 583 = 1035$$

$$465 + 387 = 852$$

$$368 + 457 = 825$$

$$\text{£4.52} + \text{£5.83} = \text{£10.35}$$

$$\text{£4.65} + \text{£3.87} = \text{£8.52}$$

$$\text{£3.68} + \text{£4.57} = \text{£8.25}$$

Part 2

$$\text{£6.54} + \text{£3.65} = \text{£10.19}$$

$$\text{£2.81} + \text{£6.65} = \text{£9.46}$$

$$\text{£5.48} + \text{£4.78} = \text{£10.26}$$

Part 3

$$\text{£4.75} + \text{£1.82} + \text{£2.37} = \text{£8.94}$$

$$\text{£7.42} + \text{£7.56} + \text{£8.54} = \text{£23.52}$$

$$\text{£8.57} + \text{£6.79} + \text{£1.65} = \text{£17.01}$$

Challenge

$$\text{£1.66} + \text{£10.68} = \text{£12.34}$$

$$\text{£1.77} + \text{£10.57} = \text{£12.34}$$

$$\text{£1.88} + \text{£10.46} = \text{£12.34}$$

$$\text{£1.99} + \text{£10.35} = \text{£12.34}$$

$$\text{£1.67} + \text{£10.67} = \text{£12.34}$$

$$\text{£1.68} + \text{£10.66} = \text{£12.34}$$

$$\text{£1.69} + \text{£10.65} = \text{£12.34}$$

$$\text{£1.78} + \text{£10.56} = \text{£12.34}$$

$$\text{£1.79} + \text{£10.55} = \text{£12.34}$$

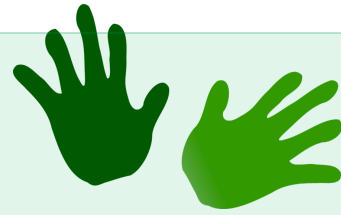
These are examples, other correct answers are possible. Check addition adds up to £12.34 .

A Bit Stuck? Pocket money

Work in pairs

Things you will need:

- 10p and 1p coins
- A pencil



What to do:

- Take it in turns to choose two items from the website page.
- Find the total. You can use 10p and 1p coins, or draw a jotting to help you.
- Write the total cost in pounds.
- Score 10 points if the total is more than £1.50.

55p and 67p

55p + 67p =

110p + 12p = 122p

£1.22

S-t-r-e-t-c-h:

Choose three items and find the total cost.

Learning outcomes:

- I can add pairs of 2-digit prices, using partitioning (answer greater than £1).
- I can write amounts between 100p and 200p in pounds.
- I am beginning to add three 2-digit prices.

Search

GO

Technology
& Gaming

Home
Electrical

Entertainment
& Books

Women

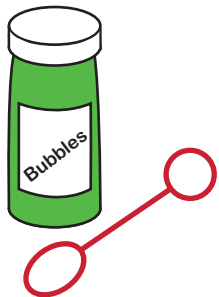
Men

Baby &
Kids

Toys

Pocket Money

Have fun spending your pocket money here - find a great range of toys and accessories at affordable prices.



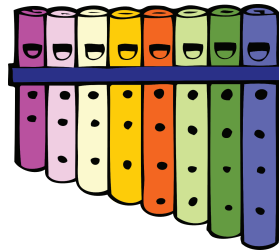
Multi-coloured bubbles
55p

Add to basket



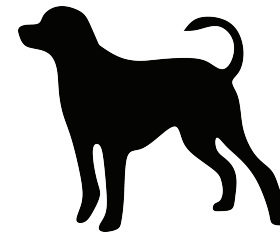
Fast spin yo-yo
67p

Add to basket



Mini pan pipes
72p

Add to basket



Stretchy dog
85p

Add to basket



Windmill
58p

Add to basket



Mini pencil pack
63p

Add to basket



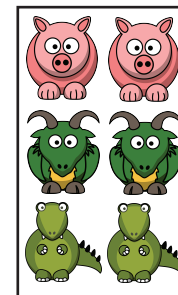
Sheriff's badge
76p

Add to basket



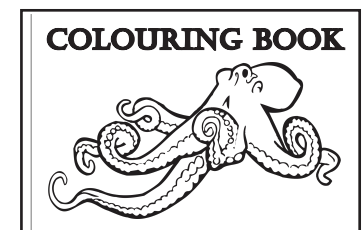
Tiger note pad
92p

Add to basket



Stickers
88p

Add to basket



Colouring book
96p

Add to basket

Check your understanding

Questions

Complete these additions using expanded column addition.

I. $£5.78 + £4.22$

II. $£2.56 + £7.44$

III. $£3.17 + £6.83$

Did you notice a pattern?

Can you write two more additions like this?

Is a column addition calculation the most efficient way to find:

$£4.99 + £7.46$

$£8.06 + £8.06$

$£4.31 + £5.69?$

Write the missing numbers in this calculation:

	£	10p	1p
	4	<input type="text"/>	7
+	5	6	<input type="text"/>

<input type="text"/>	4	5
----------------------	---	---

If $£3.47$ is subtracted from a number to leave $£3.85$, what was the number?

Check your understanding

Answers

Complete these additions using expanded column addition.

(i) $£5.78 + £4.22 = £10.$

(ii) $£2.56 + £7.44 = £10$

(iii) $£3.17 + £6.83 = £10$

Did you notice a pattern? All three additions total £10.

Can you write two more additions like this? Check children's examples. Can they articulate that the 1ps column always adds to 10p, the 10ps add to 90p and the £1s add to £9 (before moving amounts across columns)?

Is a column addition calculation the most efficient way to find:

$£4.99 + £7.46 = £12.45.$ Add £5 to £7.46 and subtract 1p.

$£8.06 + £8.06 = £16.12.$ Double each of the £s and ps.

$£4.31 + £5.69 = £10.$ 31 and 69 are complements to 100, add that (as £1) to £4 and £5.

Write the missing numbers in this calculation:

£	10p	1p
4	7	7
+ 5	6	8
<u>1</u>	<u>1</u>	
10	4	5

Note the 1s in the waiting line

If £3.47 is subtracted from a number to leave £3.85, what was the number? £7.32. Watch for children who have subtracted £3.47 from £3.85 (38p) – a bar model can help clarify that the answer is found by adding the 2 amounts:

?	
£3.47	£3.85