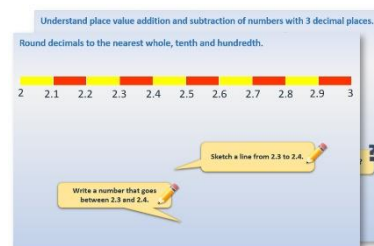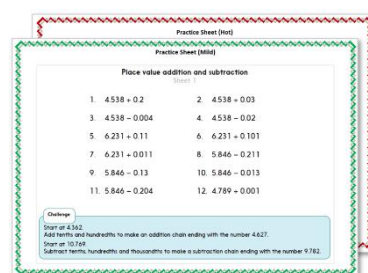# Year 4: Week 2, Day 2
Adding money

Each day covers one maths topic. It should take you about 1 hour or just a little more.
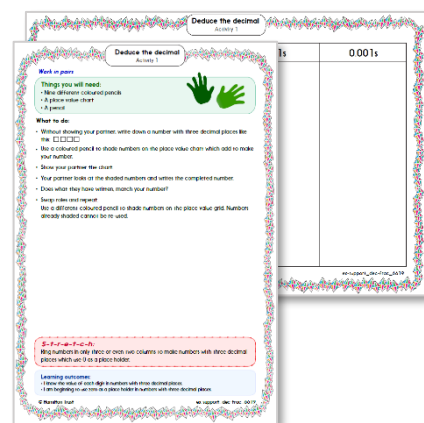
1. Start by reading through the **Learning Reminders**.
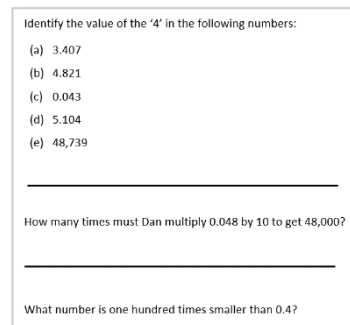   They come from our *PowerPoint* slides.

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!

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.

```
     £3  20p  4p
  +  £2  50p  8p
             10p
  _____
     £5  80p  2p
```

£5 + 80p + 2p = £5.82

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.**

Next add the 10ps.
20p + 50p + 10p = ?

Then the £s.
£3 + £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.**

```
   324
 + 258
     1
 -----
   582
```

Let's check through that...

1s

10s

100s

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

```
   £3.24
 + £2.58
       1
 -------
   £5.82
```

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…

```
  374
+ 283
    1
─────
  657
```

```
  £3.74
+ £2.83
      1
──────
  £6.57
```

What happened when we added 70 and 80?

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

Fill in the missing numbers:

1.   £1.00   20p ☐
    + £2.00   30p ☐
       £3.00 ☐   8p

2.   £3.00 ☐   5p
    + £2.00 ☐   1p
       £5.00   20p ☐

3.   £1.00   20p ☐
    + £3.00   20p ☐
       £4.00 ☐   7p

4.   £3.00   20p ☐
    + £1.00   50p ☐
           10p
       £4.00 ☐   1p

5.   £3.☐2
    + £2.☐6
         1
       £6. 2☐

6.   £4. 3 ☐
    + £2. 2 ☐
         1
       £6.☐☐

7.   £3.☐5
    + £2.☐1
         1
       £6. 3☐

8.   £4. 1 ☐
    + £3. 2 ☐
         1
       £7.☐   4

9.   £4.☐1
    + £1.☐4
         1
       £6. 1☐

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)

1.   £1.00 20p **4p**
   + £2.00 30p **4p**
   _____
     £3.00 **50p** 8p

2.   £3.00 **10p** 5p
   + £2.00 **10p** 1p
   _____
     £5.00 20p **6p**

3.   £1.00 20p **4p**
   + £3.00 20p **3p**
   _____
     £4.00 **40p** 7p

4.   £3.00 20p **9p**
   + £1.00 50p **2p**
                10p
   _____
     £4.00 **80p** 1p

5.   £3.**82**
   + £2.**4**6
        1
   _____
     £6.2**8**

6.   £4.3**7**
   + £2.2**8**
        1
   _____
     £6.**65**

7.   £3.**95**
   + £2.**4**1
        1
   _____
     £6.3**6**

8.   £4.1**8**
   + £3.2**6**
        1
   _____
     £7.**44**

9.   £4.**21**
   + £1.**9**4
        1
   _____
     £6.1**5**

Challenge

£56.92 + £30.55 + £27.76 = £115.23 (largest)
£14.76 + £25.38 + £27.76 = £67.90 (smallest)
Closest total to £90 is £83.69 (£27.76 + £25.38 + £30.55)

Adding money (hot)

Part 1

452 + 583 = **1035**   £4.52 + £5.83 = **£10.35**
465 + 387 = **852**   £4.65 + £3.87 = **£8.52**
368 + 457 = **825**   £3.68 + £4.57 = **£8.25**

Part 2

£6.54 + £3.65 = **£10.19**
£2.81 + £6.65 = **£9.46**
£5.48 + £4.78 = **£10.26**

Part 3

£4.75 + £1.82 + £2.37 = **£8.94**
£7.42 + £7.56 + £8.54 = **£23.52**
£8.57 + £6.79 + £1.65 = **£17.01**

Challenge

£1.66 + £10.68 = £12.34   **£1.77 + £10.57 = £12.34**   **£1.88 + £10.46 = £12.34**
£1.99 + £10.35 = £12.34   **£1.67 + £10.67 = £12.34**   **£1.68 + £10.66 = £12.34**
£1.69 + £10.65 = £12.34   **£1.78 + £10.56 = £12.34**   **£1.79 + £10.55 = £12.34**
These are examples, other correct answers are possible. Check addition adds up to £12.34.

Work in pairs

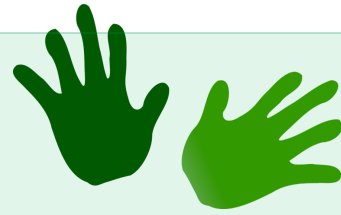**Things you will need**:
• 10p and 1p coins
• A pencil

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

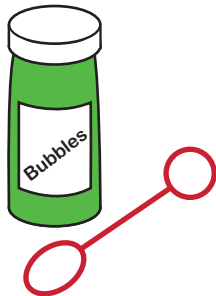*S-t-r-e-t-c-h*:
Choose three items and find the total cost.

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.

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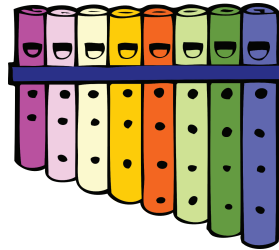
Pocket Money

Have fun spending your pocket money here - find a great range of toys and accessories at affordable prices.
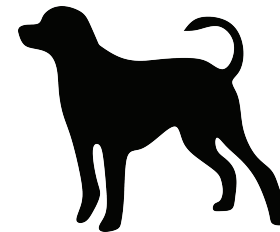
Multi-coloured bubbles
55p
Add to basket

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
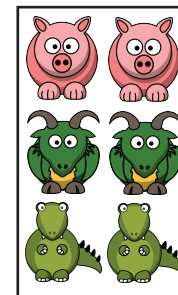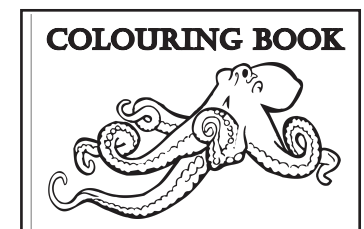
Mini pencil pack
63p
Add to basket

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	☐	7
+ 5	6	☐
☐	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
1	1	
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