Week 11, Day 1
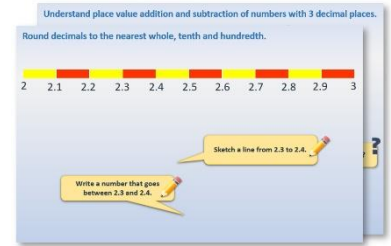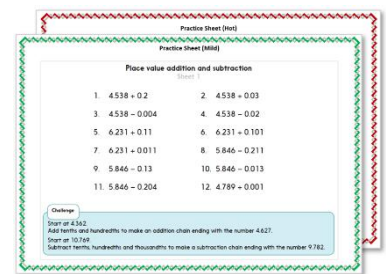## Add and subtract multiples of 10 and 100

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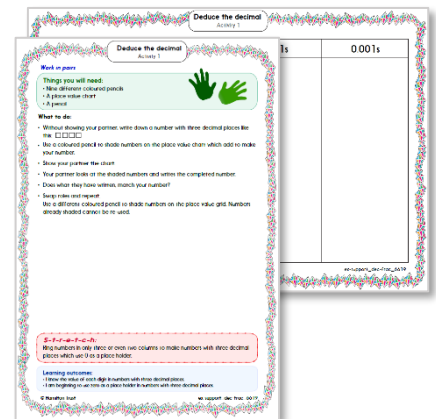
1. Start by reading through the **Learning Reminders**.
    They come from our *PowerPoint* slides.

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. Think you've cracked it? Whizzed through the Practice Sheets?
    Have a go at the **Investigation**…

Learning Reminders

Add multiples of 10.

Which digit will change when we find **346 + 50?**

346 + 50

We can count on 5 tens from 346... 356, 366, 376, 386, **396.** Only the 10s digit changes!

Now try **231 + 30** and **636 + 20**, which digit changes each time?

231 + 30 = **261**
636 + 20 = **656**
The 10s digits change.

376 + 50

Count on 5 10s from 376... 386, 396, 406, 416, **426.** What happened this time?

We have **crossed 400** so both the 10s and the 100s changed!

Learning Reminders

Subtract multiples of 10.

Now let's try **subtracting** 10s...

386 - 50

Which digit changes?

We can **count back** five 10s from 386… 376, 366, 356, 346, **336.** Only the 10s digit changes!

Now try **336 – 50.**

What will happen this time?

Let's **count back** five 10s from 336… 326, 316, 306, 296, **286.**

Both the 100s and the 10s digit change; we have crossed a **multiple of 100.**

Learning Reminders

Add and subtract multiples of 100.

Which digit(s) will change when we find 346 + 500?

346 + 500

We can count on five 100s from 346: 446, 546, 646, 746, 846. Only the 100s digit changes this time.

Now try 846 – 500.

What will happen this time?

Let's count back five 100s from 846... 746, 646, 546, 446, 346.

Just the 100s changed.

Practice Sheet Mild
Add and subtract multiples of 10 and 100

Solve the following:

1. $245 + 20 =$

2. $245 + 200 =$

3. $785 - 30 =$

4. $785 - 300 =$

5. $637 + 50 =$

6. $493 - 50 =$

7. $478 + 400 =$

8. $903 - 500 =$

9. $385 + 50 =$

10. $476 + 70 =$

11. $825 - 40 =$

12. $731 - 50 =$

Challenge

Make up another addition of 10s where both the 10s and 100s digit change.

Make up another subtraction of 10s where both the 10s and 100s digit change.

Practice Sheet Hot
Adding and subtracting multiples of 10 and 100 word problems

1. Sophie had collected 58 football stickers. Then she bought 20 more. How many does she have now?

2. Kent cricket club scored 172 runs in their first innings. They scored a further 300 runs in their second innings. What is their total score?

3. Emily had 96 Lego™ minifigures. She decided to give 70 away. How many did she have left?

4. George had 341 days to wait until his birthday. After 200 days wait, how many days were left until the big day?

5. There are 273 people in the audience. 40 more people come in. How many altogether?

6. There were 222 ants in the colony. If 300 more move in, how many would be in the colony?

7. There were 554 fish in a shoal. 50 were eaten by some passing sharks! How many fish are left?

8. There were 735 people on the beach. 400 left because it got too hot. How many were left?

Challenge

Make up word problems of your own using the following rules:
- just the 10s digit changes.
- just the 100s digit changes.
- both the 10s and the 100s digits change.

Practice Sheets Answers

Add and subtract multiples of 10 and 100 (mild)

1. 245 + 20 = 265
2. 245 + 200 = 445
3. 785 - 30 = 755
4. 785 - 300 = 485
5. 637 + 50 = 687
6. 493 - 50 = 443
7. 478 + 400 = 878
8. 903 - 500 = 403
9. 385 + 50 = 435
10. 476 + 70 = 546
11. 825 - 40 = 785
12. 731 - 50 = 681

Challenge

Make up another addition of 10s where both the 10s and 100s digit change. E.g. 567 + 70

Make up another subtraction of 10s where both the 10s and 100s digit change. E.g. 833 – 50

### Adding and subtracting multiples of 10 and 100 - word problems (hot)

1. Sophie has 78 football stickers.
2. Kent cricket club has a running total of 472.
3. Emily has 26 Lego™ minifigures left.
4. George has 141 days to wait until his birthday.
5. There are 313 people in the audience.
6. There are 522 ants in the colony hive.
7. There are 504 fish left.
8. There are 335 people left on the beach.

Work in pairs

Things you will need:
• A spider
• A 1-100 grid
• Addition and subtraction cards
  A pencil

What to do:

• Spread the cards out on the table.

• Choose a card without pointing to it.
  Don't tell your partner which card you chose.

• Use Spider to show the secret addition or
  subtraction on the grid.

• Can your partner guess which card you chose?
  If so, you both win 10 points.

• Write the addition or subtraction Spider
  worked out, including the answer.

• Swap roles and repeat.
  See if you can score at least 50 points.

$35 + 20 = 55$

$78 - 30 =$

S-t-r-e-t-c-h:
Choose an addition and work out the answer without using Spider on the grid.
Choose a subtraction and work out the answer without using Spider on the grid.

Learning outcomes:
• I can add and subtract 20 using a 1-100 grid.
• I am beginning to add and subtract 20 without a 1-100 grid.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
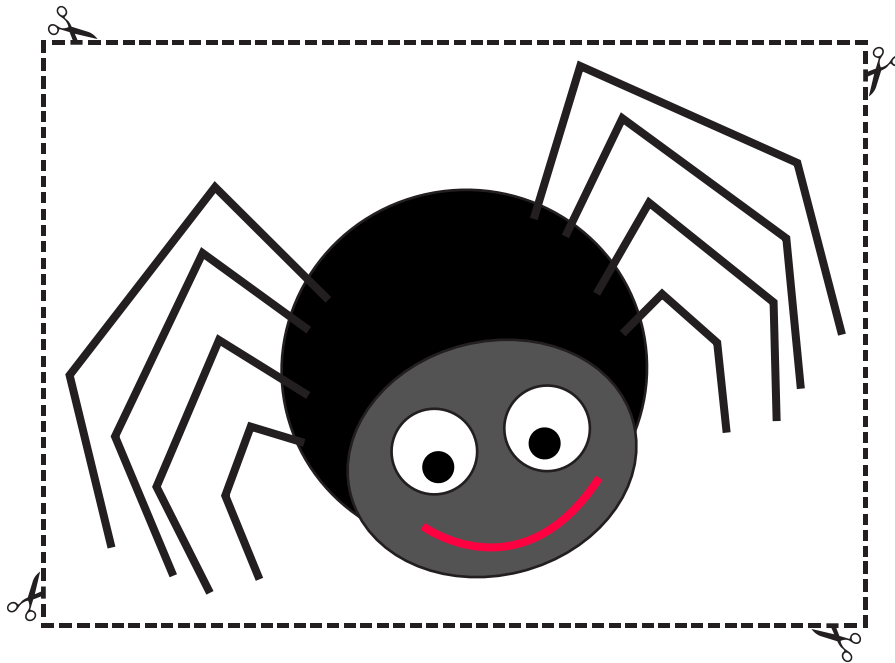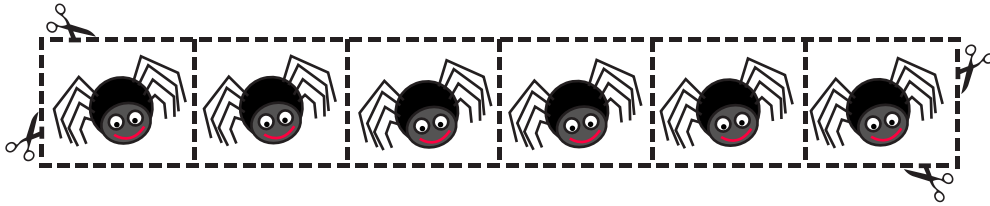
35 + 20	76 - 20	52 + 30
78 - 30	97 - 40	56 + 40
60 + 30	90 - 50	43 + 50
46 + 30	68 - 30	91 - 40

Place value puzzles

1. Write any 3-digit number.
    Subtract your choice of 1-digit number.
    Is your answer a multiple of 100?

    No: Adjust your starting number so that when you subtract your chosen 1-digit number, the answer is a multiple of 100.

    Yes: Go to question 2.

2. Write three other 3-digit numbers that share this property.
    What property do these numbers all share?

3. Write four 3-digit numbers where subtracting a number more than 90 gives a multiple of 100.
    What property do these numbers all share?

4. Write four 3-digit numbers where subtracting a number greater than 500 gives a 2-digit number.
    What property do these numbers all share?

5. Write four 3-digit numbers where subtracting 99 gives a 2-digit number.

6. Make up another puzzle like this for your partner to try.

Challenge

How many times can I add 110 to 209 before I get over 1000?
What 3-digit number should I start with to enable me to add 111 eight times and get 998?