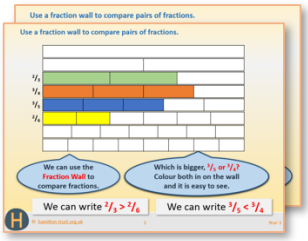
Week 9, Day 2

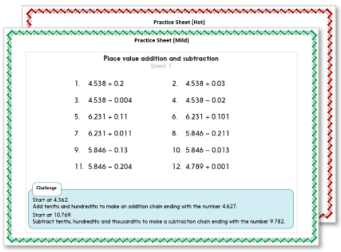
Place 6-digit numbers on landmarked lines.

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.



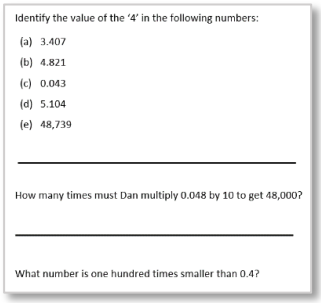
2. Tackle the questions on the **Practice Sheet**.
   There might be a choice of either Mild (easier) or Hot (harder)!
   Check the answers.



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**…

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

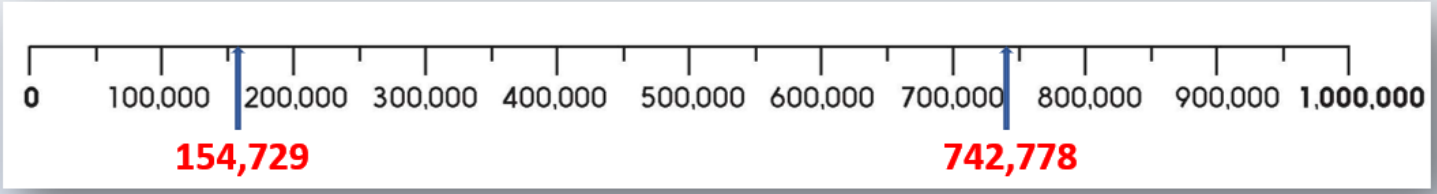


Learning Reminders

Place 6-digit numbers on landmarked lines

1,000,000.
One million has 6 zeros!
It also has one digit for every letter in the word 'million'.

We can place large numbers on a 0-1,000,00 number line using the landmarks as a guide.



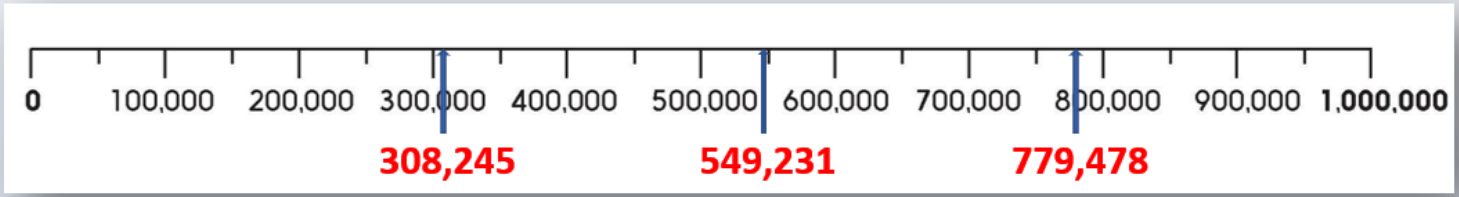
154,729 comes after 150,000.

742,778 comes before 750,000.

Learning Reminders

Place 6-digit numbers on landmarked lines

549,231 comes before 550,000.



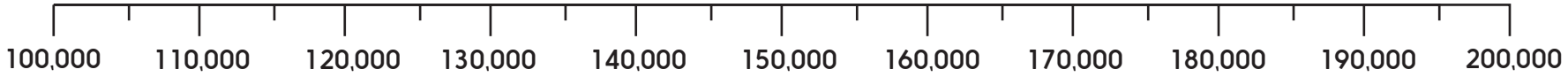
308,245 comes after 300,000.

779,478 comes just over halfway between 750,000 and 800,00.

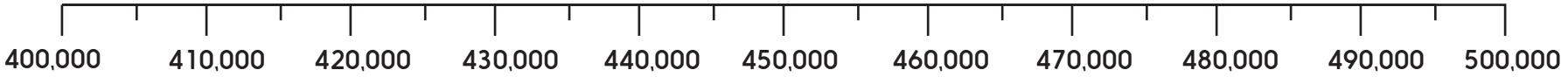
Practice Sheet Mild

Placing numbers

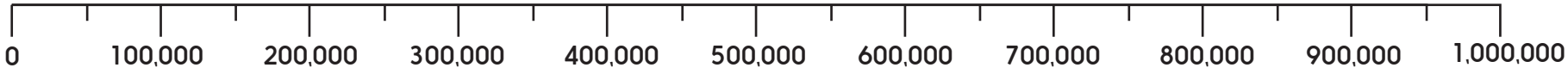
Mark on the following numbers: 125,000, 132,000, 175,000, 199,000



Mark on the following numbers: 415,000, 429,000, 463,000, 472,000



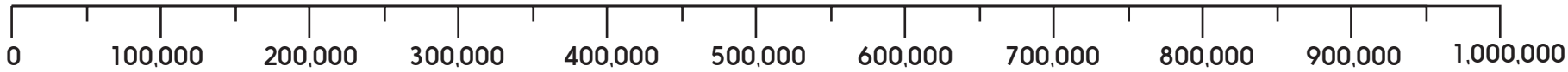
Mark on the following numbers: 350,000, 425,000, 575,000, 730,000.
Then mark on a number between 200,000 and 300,000, one between 500,000 and 600,000, and one between 800,000 and 900,000.



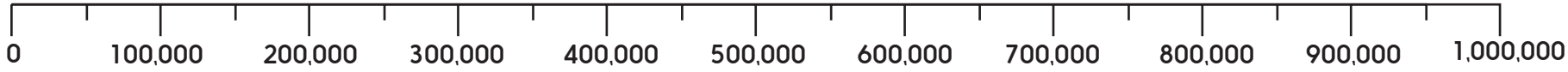
Practice Sheet Hot

Placing numbers

Mark on the following numbers: 350,000, 425,000, 575,000, 730,000



Mark on the following numbers: 249,000, 301,000, 425,000, 894,000



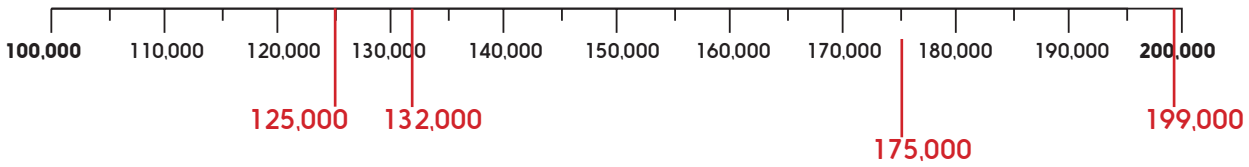
Label this number line, then mark on the following numbers: a) 93,000, b) 342,000, c) 206, 000, d) 163,000, e) 482,000

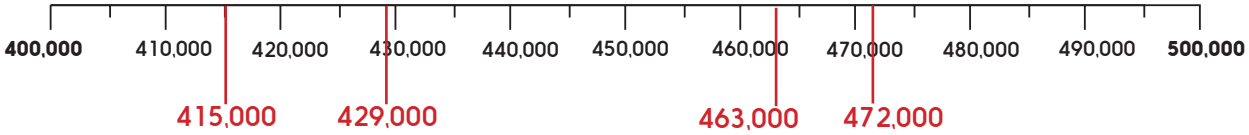
Challenge

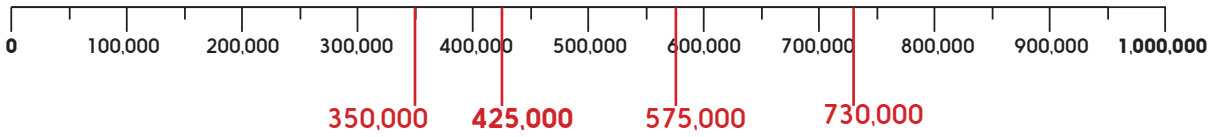
Sketch your own 1,000,000 to 3,000,000 line without any numbers in between.
Choose 5 numbers to mark on it.

Practice Sheets Answers

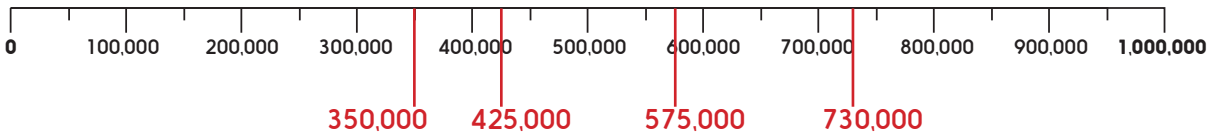
Placing numbers (mild)

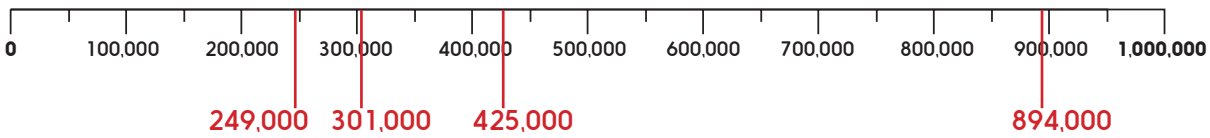


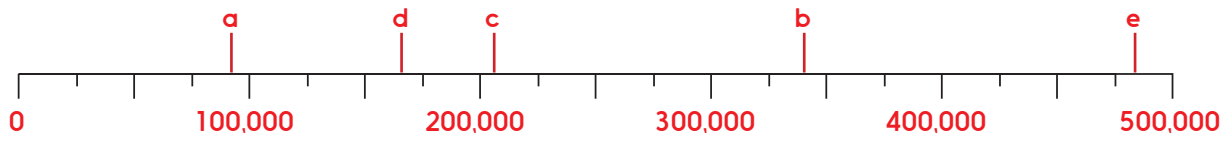




Placing numbers (hot)







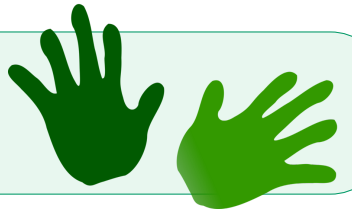
A Bit Stuck?
Line 'em up!

Work in pairs, but write on your own sheet

What to do:

- Shuffle a pack of 1 to 9 cards. Turn them over one at a time. Use them to fill in the missing digits in these 4-digit numbers. Mark them on the line.

Things you will need:
- A pencil
- A pack of 1 to 9 digit cards



2□□□ 2□□□ 2□□□

- Shuffle the cards again and use them to fill in the missing digits in these 4-digit numbers. Mark these on the line.

5□□□ 5□□□ 5□□□

- Shuffle the cards again and use them to fill in the missing digits in these 4-digit numbers. Mark these on the line.

9□□□ 9□□□ 9□□□

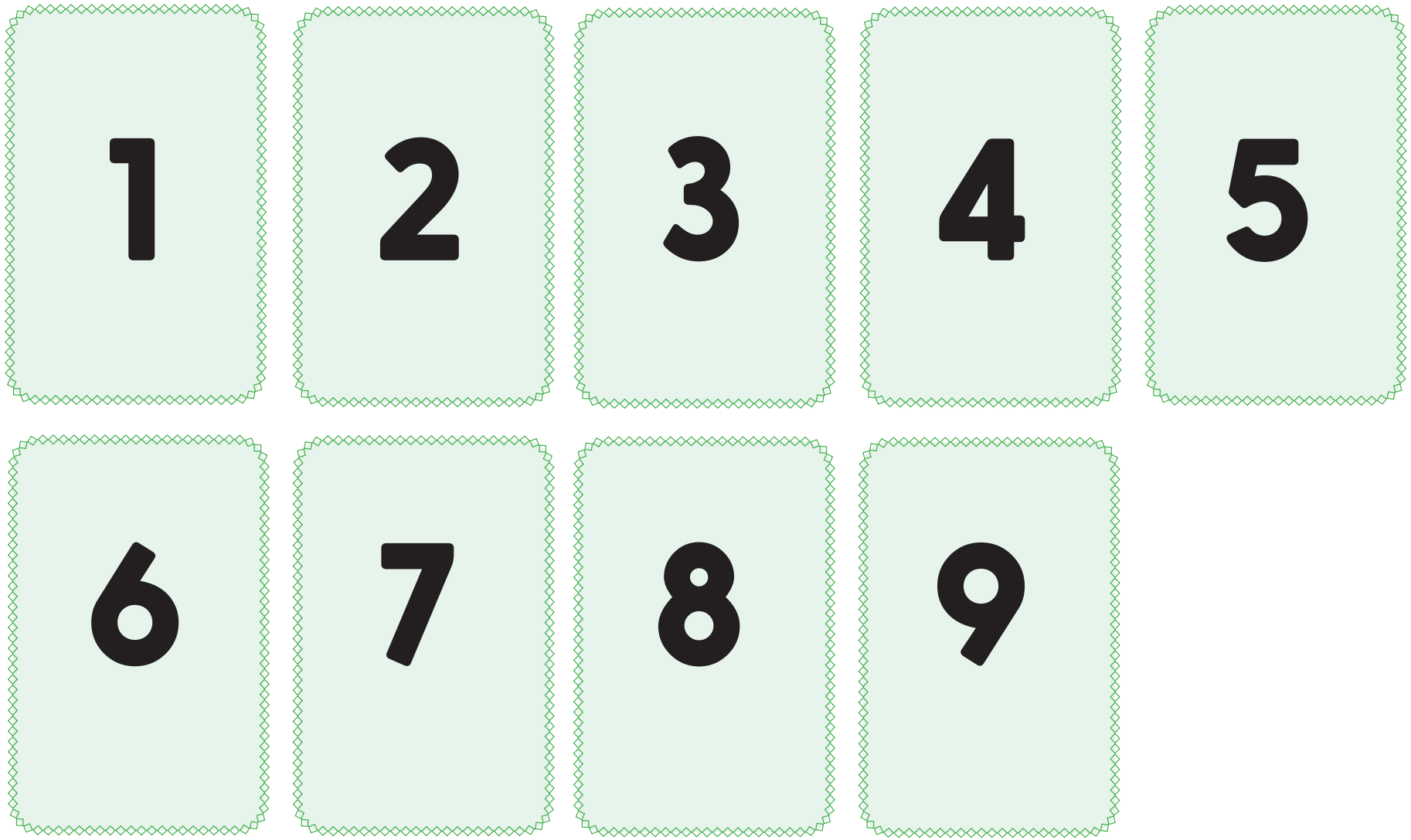
S-t-r-e-t-c-h:

Shuffle the digit cards. Take four to make a 4-digit number. Draw a line from the multiple of 1000 before the number to the multiple of 1000 after the number. Mark the number on the line. Repeat.

Learning outcomes:
- I can place 4-digit numbers on a line marked in 100s.
- I am beginning to place 4-digit numbers on a line marked in 1000s.

A Bit Stuck?

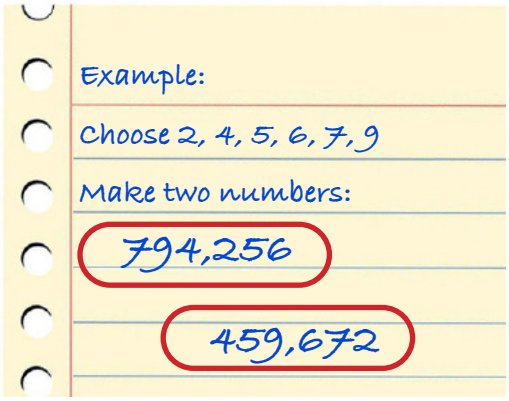
Line 'em up!



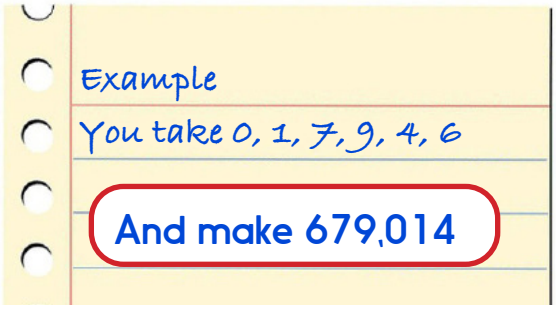
Investigation
In-between if you can!

You will need:
- 0 to 1,000,000 landmarked line
- 0 to 9 cards

What to do:
- Shuffle the pack of 0–9 cards. Take six random cards and use the same 6 digits in two *different* ways to make a pair of 6-digit numbers. Mark them on the 0 to 1,000,000 line using a pencil.



- Shuffle the cards and take six more cards at random. Can you use them to make a number **between** the two already on the line?



- Start with 10 points. If successful in placing the new number between the first two, you score a point; if not you lose a point!

- Erase the numbers and repeat...

- How quickly can you reach 20 points?
  Can you describe a strategy to help win the points?

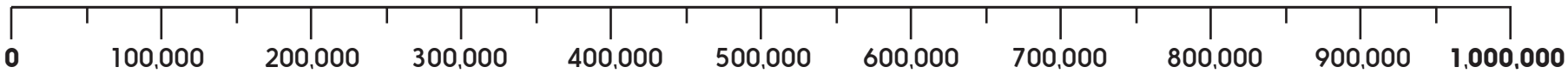
Challenge

1. Play the game in reverse...
2. Try to place your first two numbers so that is impossible to place a third number between them.

What are good strategies this time?

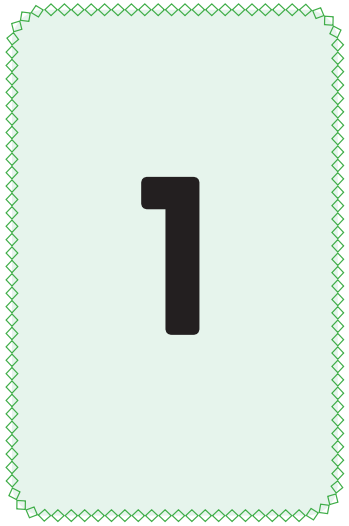
Investigation

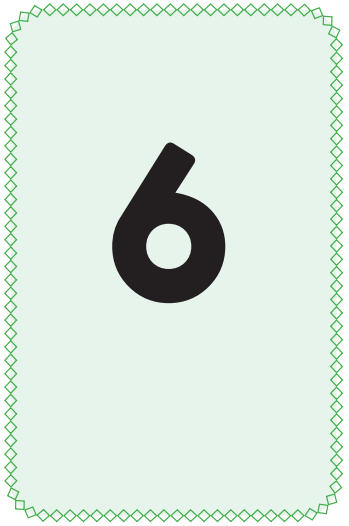
In-between if you can!

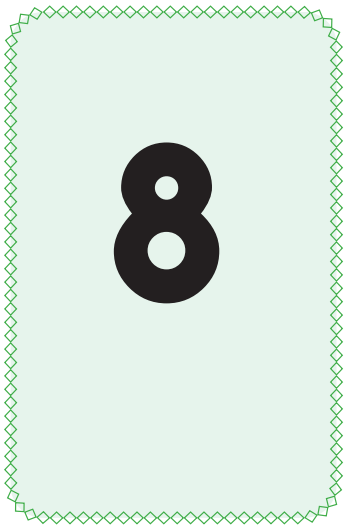


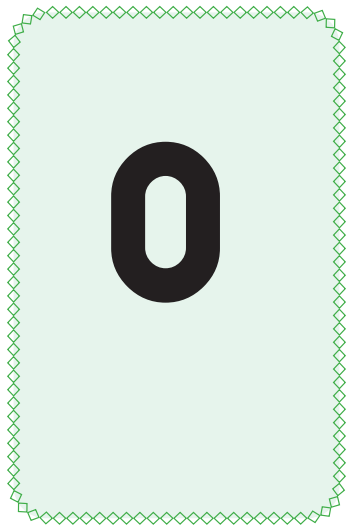
Investigation

In-between if you can!









Explore more Hamilton Trust Learning Materials at https://wrht.org.uk/hamilton

Check your understanding

Questions

True or false?

- 10 more than 99,999 is 100,090
- 100 less than 202,020 is 201,920
- 199,009 add 1000 is 201,009
- Add 10,000 to 105,432 five times to get 150,432

Which of these numbers come before 350,000 on a number line and which after?

372,500 349,944 309,999 355,555

Fold here to hide answers

Check your understanding

Answers

True or false?

- 10 more than 99,999 is 100,090 False, it is 100,009.
- 100 less than 202,020 is 201,920 True.
- 199,009 add 1000 is 201,009 False, it is 200,009.
- Add 10,000 to 105,432 five times to get 150,432 False, it is 155,432.

Which of these numbers come before 350,000 on a number line and which after?

- 372,500 After
- 349,944 Before
- 309,999 Before
- 355,555 After