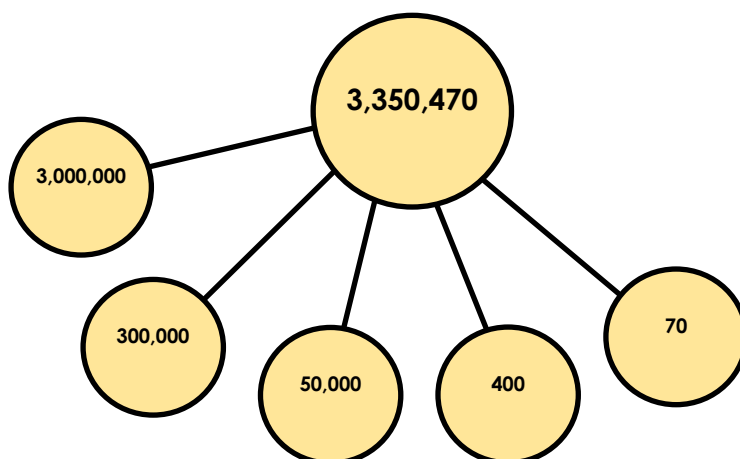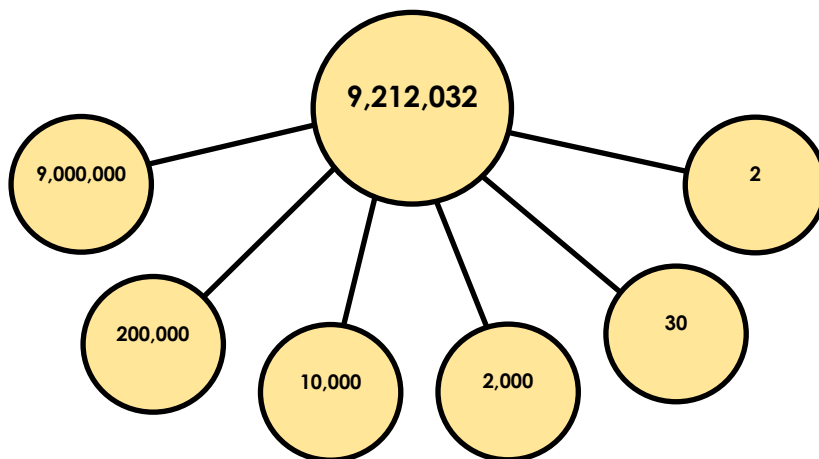## Fluency 1

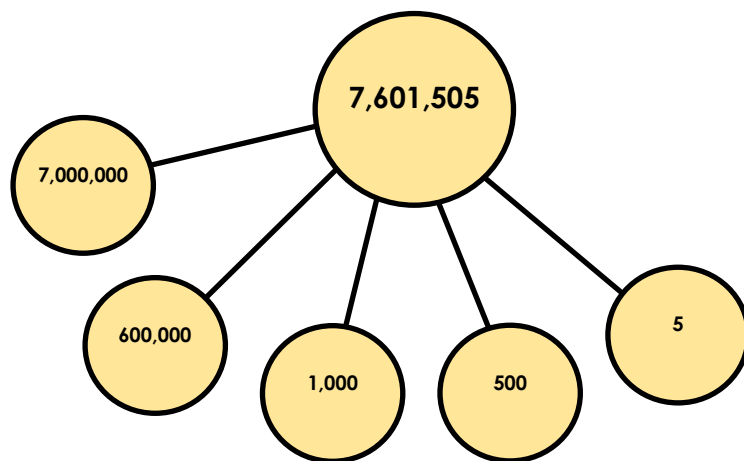There are 3 millions, 5 hundred thousands, 2 ten thousands, 4 thousands, 9 hundreds, 6 tens and 7 ones.

The number is three million, five hundred and twenty four thousand, nine hundred and sixty seven.

Answers for 6 and 5 counters placed on the Gattegno chart will vary.

Fluency 2

Part-whole models should appear as shown:

Fluency 3

7,122,508

9,255,476

808,606

3,023,002

Fluency 4

Answers for Fluency 4 will vary.

Examples:

6,000,000 + 390,000 + 500 + 71

4,000,000 + 2,300,000 + 90,000 + 571

6,000,000 + 300,000 + 90,000 + 100 + 471

Fluency 5

The value of the digit 1 is 1,000,000.

The value of the digit 5 is 50,000.

The value of the digit 9 is 9,000.

The value of the digit 7 is 70.

45,667

Reasoning 1

Modelled DAB Reasoning Response

D – Jerry is incorrect.

A – He has read the number incorrectly.

B – When reading the number, Jerry did not say the word 'thousand'. He should have said, "The number is four million, five hundred and nine thousand, four hundred and twenty-five."

Reasoning 2

Modelled DAB Reasoning Responses

D – There is a mistake.

A – 8,502,567 add 4,000 does not equal 8,542,567.

B – The partitioning is incorrect. The person completing the work made an error in place value as 4,000 should be 40,000.

M	HTH	TTH	TH	H	T	O
• • • • • • • •	• • • • •		• • • • • •	• • • • •	• • • • • •	• • • • • • •

8,502,567 + 4,000 = 8,506,567

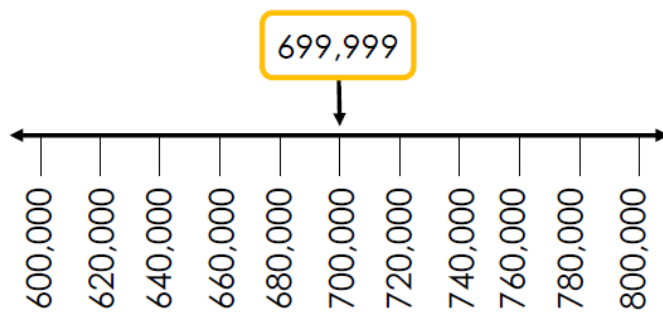## Reasoning 3

Modelled DAB Reasoning Responses

D – I do not agree with Darcey.

A – The number is not placed correctly on the number line.

B – There are ten notches between 600,000 and 800,000. If you divide the difference (200,000) by 10, we know that the scale increases by 20,000 per notch.

This is where Darcey should have placed the number:

699,999

Reasoning 4

Modelled DAB Reasoning Response

D – Sometimes

A – 7-digit numbers which are larger do not always need more counters.

B –

1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000
100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000
10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

The orange counter represents a greater number than those represented by blue counters, even though it uses less counters.

4,000,000 > 3,025,578

1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000
100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000
10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

In this example, the orange counters represent a greater number than those represented by blue counters. In this case, the larger number does need more counters to represent it than the smaller number.

7,077,657 > 6,600,091

Problem Solving 1

Ranjit

3 4 3 4 3 4 3

Anita

4 5 4 5 4 5 4

Alfie

5 6 5 6 5 6 5