

Subtraction Strategies

105		Calculation & Vocabulary
107	S1	Objects and Pictures
110	S2	Counting Back
112	S3	Counting On
114	S4	Backwards Bounce
116	S5	Backwards Jump
118	S6	10s Jump, 1s Jump
127	S7	Triple Jump
136	S8	Part/Whole (Minuend)
144	S9	Part/Whole (Subtrahend)
152	S10	Expanded Column
158	S11	Column Subtraction



Y3			S8e: Part/Whole (\$) $723 - 356 = 367$ $723 - 323 = 400$ $400 - 83 = 367$ $44 + 323 = 367$	S9e: Part/Whole (M) $723 - 356 = 367$ $44 + 323 = 367$	S8e: Part/Whole (\$) $723 - 356 = 367$ $723 - 323 = 400$ $400 - 33 = 367$	S9e: Part/Whole (M) $723 - 356 = 367$ $44 + 323 = 367$	S10e: Expanded Column $723 - 356 = 367$	S1e: Column Subtraction $723 - 356 = 367$
Y4			S8f: Part/Whole (\$) $1375 - 538 = 837$ $1375 - 525 = 850$ $850 - 13 = 837$ $37 + 800 = 837$	S9f: Part/Whole (M) $1375 - 538 = 837$ $37 + 800 = 837$	S8f: Part/Whole (\$) $1375 - 538 = 837$ $1375 - 525 = 850$ $850 - 13 = 837$	S9f: Part/Whole (M) $1375 - 538 = 837$ $37 + 800 = 837$		S1f: Column Subtraction $1375 - 538 = 837$
Y4			S6g: 1000s, 100s, 10s, 1s Jump $5042 - 1776 = 3266$ $224 + 3042 = 3266$	S9g: Part/Whole (M) $5042 - 1776 = 3266$ $224 + 3042 = 3266$		S9g: Part/Whole (M) $5042 - 1776 = 3266$ $224 + 3042 = 3266$		S1g: Column Subtraction $5042 - 1776 = 3266$
Y5								S1h: Column Subtraction $742831 - 427358 = 315473$
Y5			S8h: Part/Whole (\$) $13.4 - 8.7 = 4.7$ $13.4 - 8.4 = 5$ $5 - 0.3 = 4.7$ $0.3 + 4.4 = 4.7$	S9h: Part/Whole (M) $13.4 - 8.7 = 4.7$ $0.3 + 4.4 = 4.7$	S8h: Part/Whole (\$) $13.4 - 8.7 = 4.7$ $13.4 - 8.4 = 5$ $5 - 0.3 = 4.7$	S9h: Part/Whole (M) $13.4 - 8.7 = 4.7$ $0.3 + 4.4 = 4.7$		S1i: Column Subtraction $13.4 - 8.7 = 4.7$
Y5			S1j: Column Subtraction $72.43 - 47.85 = 24.58$		S1j: Column Subtraction $72.43 - 47.85 = 24.58$			S1j: Column Subtraction $72.43 - 47.85 = 24.58$
Y5			S1k: Column Subtraction $12.4 - 5.97 = 6.43$		S1k: Column Subtraction $12.4 - 5.97 = 6.43$			S1k: Column Subtraction $12.4 - 5.97 = 6.43$



Progression Overviews

Sense of Number Written Strategies VCP © Sense of Number 2018



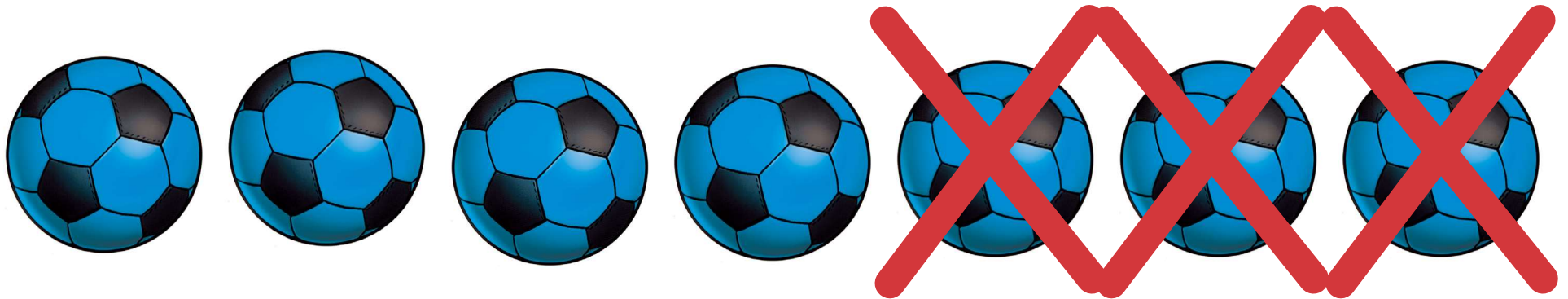
St Philip's CE Primary School

S1: Objects & Pictures

1

Removing Items (Taking Away)

“There were 7 footballs in the PE cupboard. 3 of them were taken out. How many were left in the cupboard? Answer: 4”



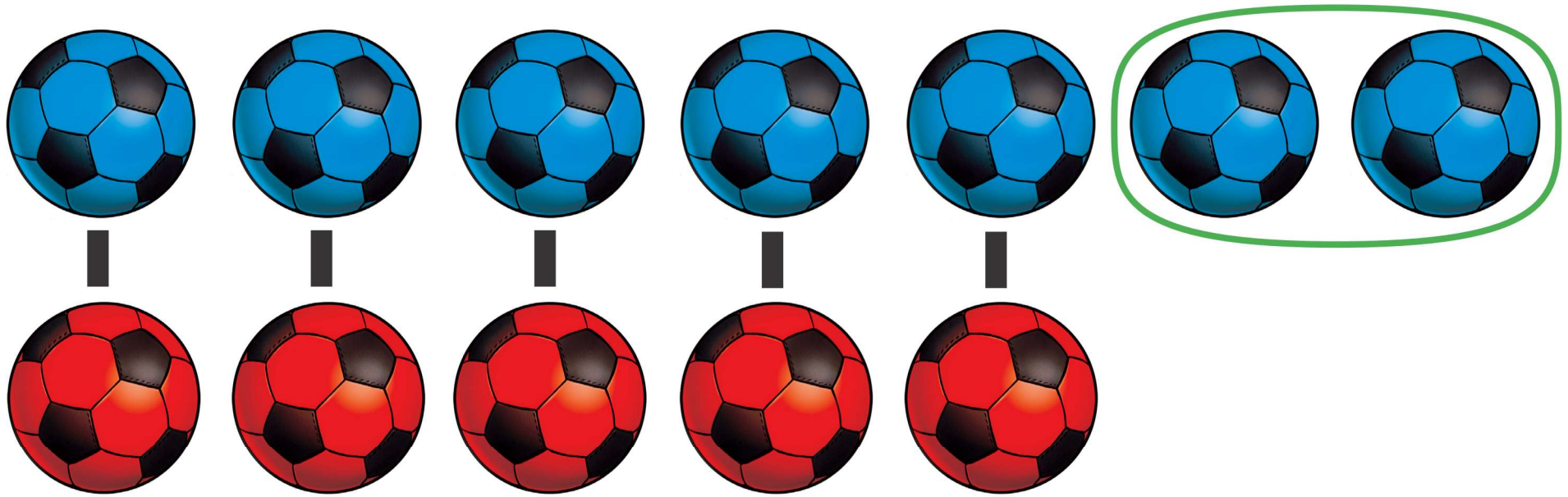
$$7 - 3 = 4$$



S1a: Objects and Pictures

1

Comparing Sets



$$7 - 5 = 2$$

“There were **7 blue footballs** and **5 red footballs**? How many more blue footballs were there than red?” (What is the difference?)

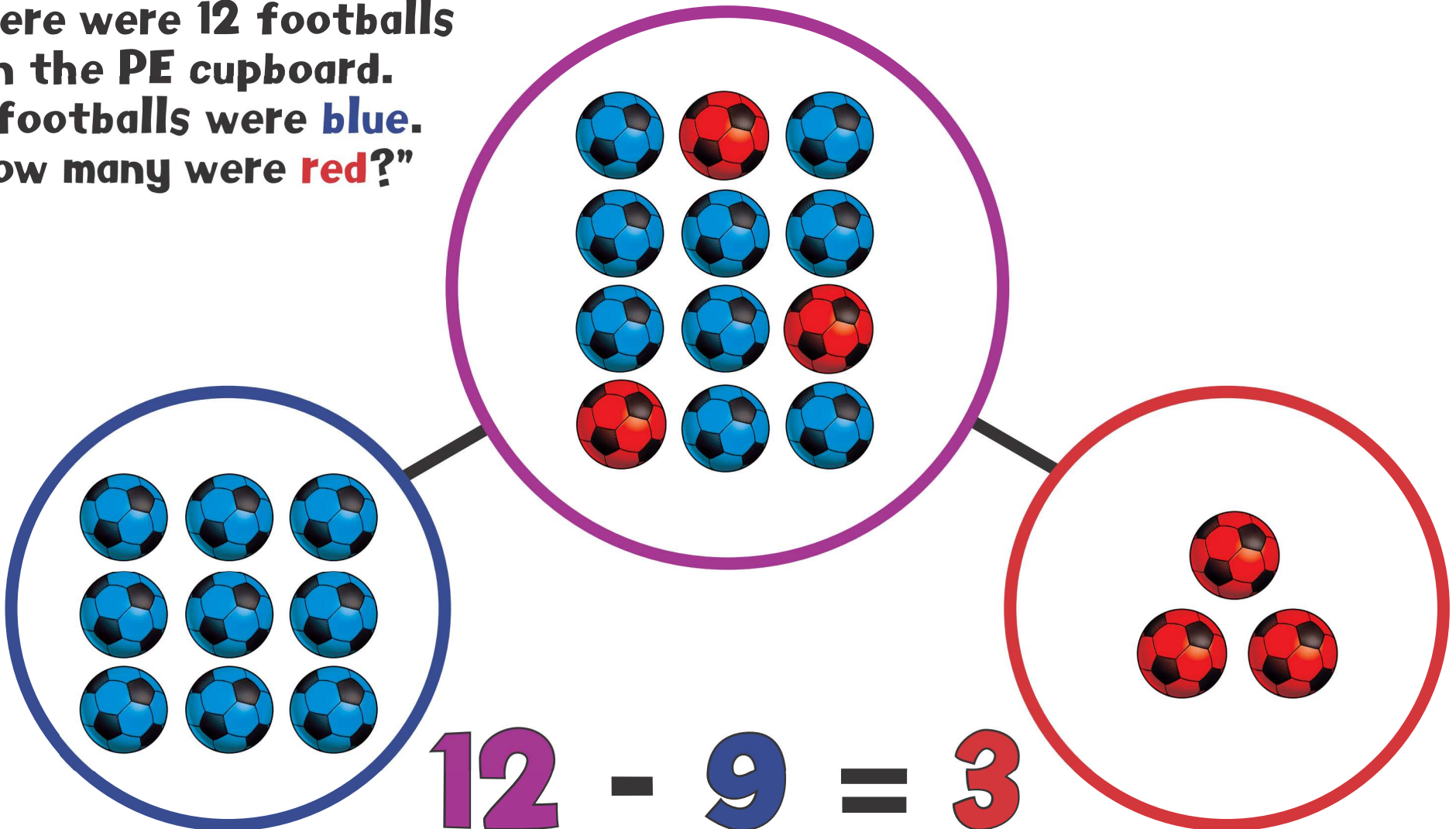


S1b: Objects and Pictures

1

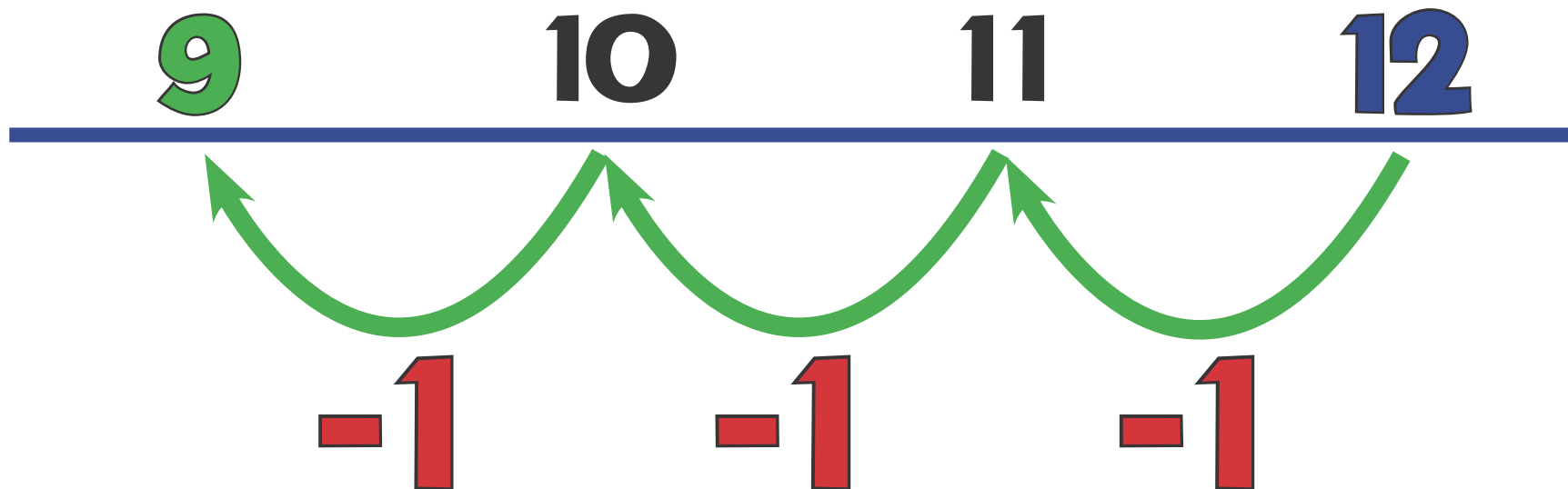
Part/Whole Model

"There were 12 footballs
in the PE cupboard.
9 footballs were blue.
How many were red?"



S2: Counting Back

1



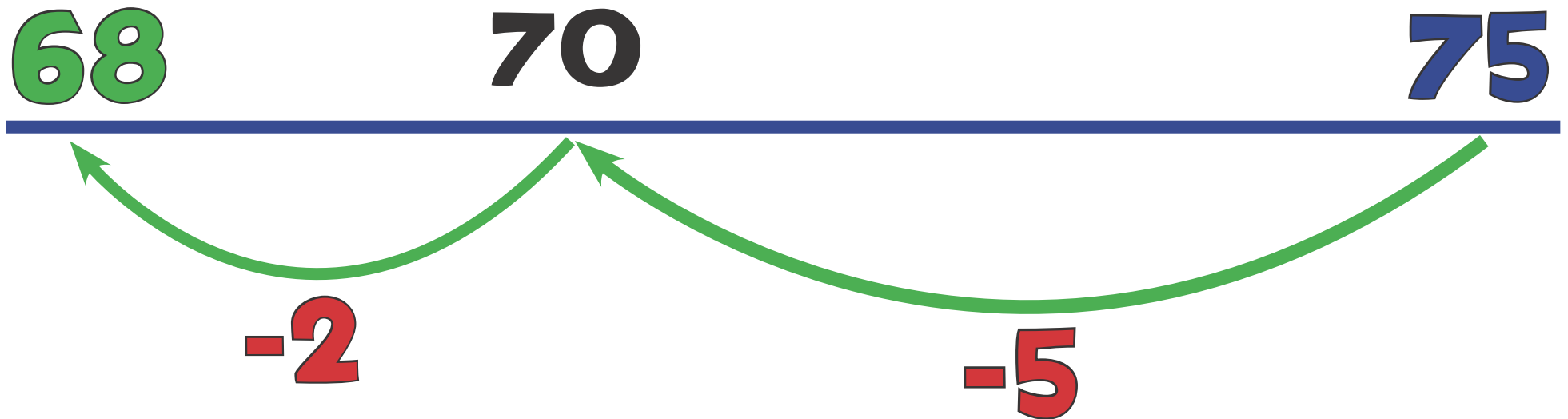
$$12 - 3 = 9$$

“What do I get if I take 3 away from 12? Answer: 9”



S2a: Counting Back

2 Big Steps

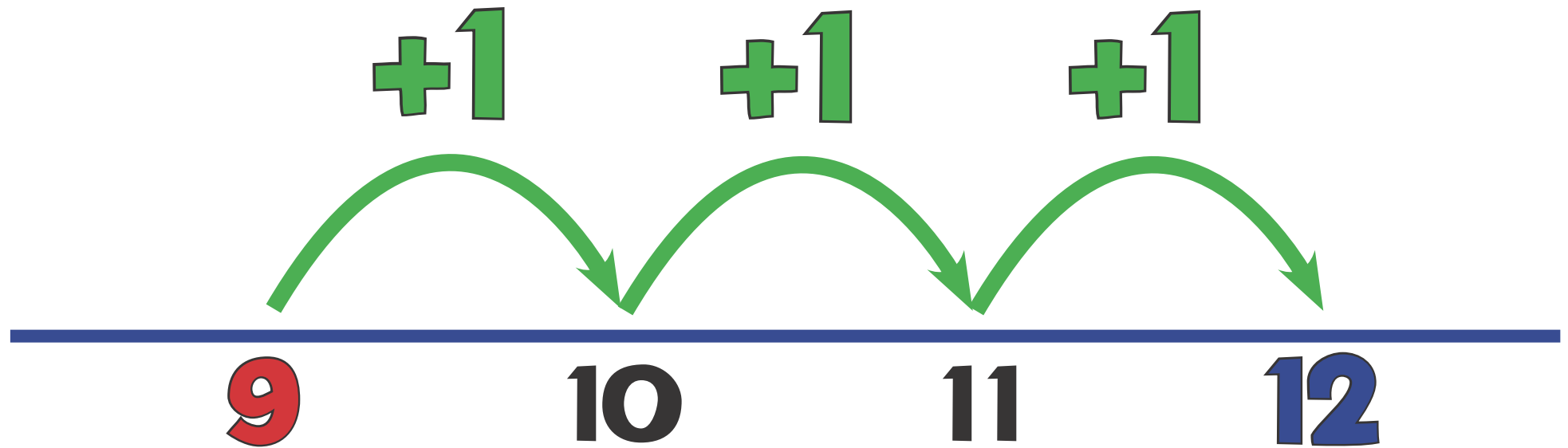


$$75 - 7 = 68$$



S3: Counting On

1



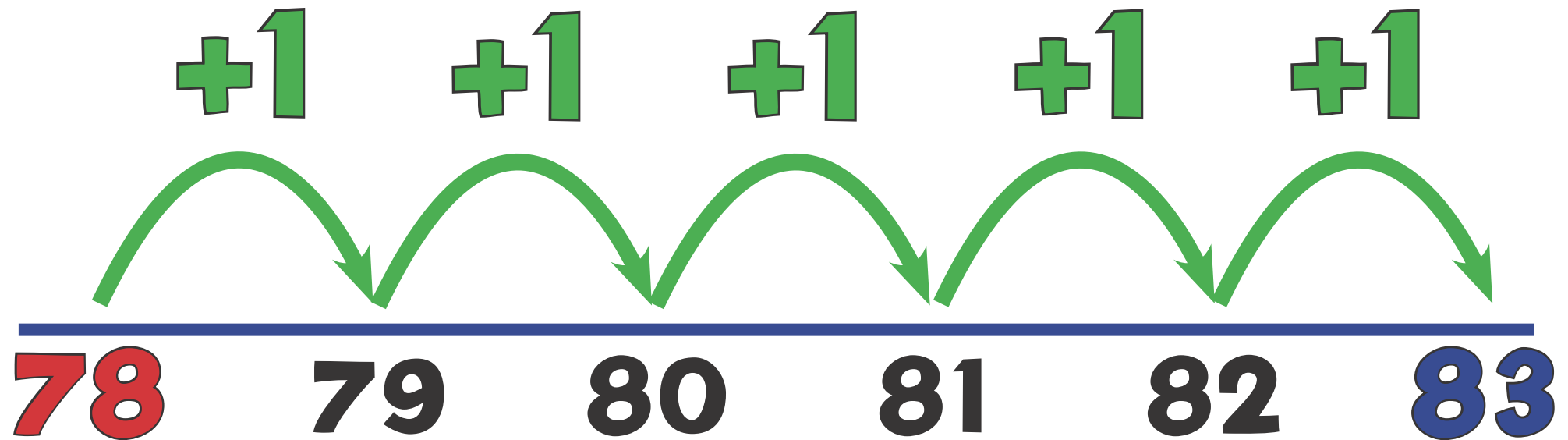
$$12 - 9 = 3$$

“How many more is **12** than **9**? What is the difference?”



S3a: Counting On

2



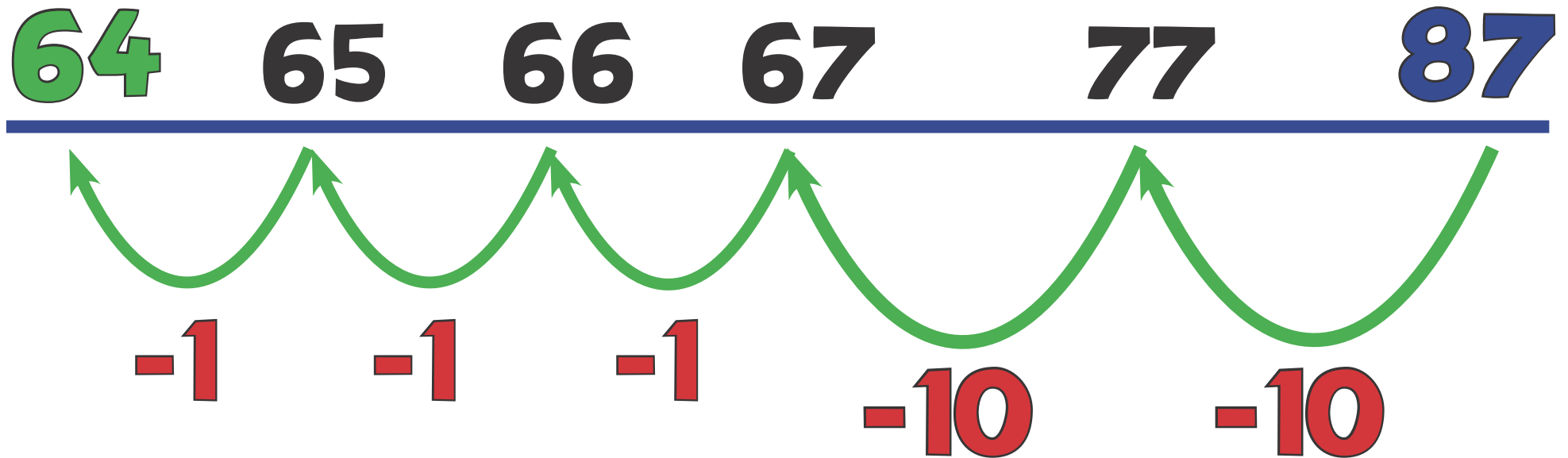
$$83 - 78 = 5$$

“How many more is 83 than 78? What is the difference?”



S4: Backwards Bounce

2

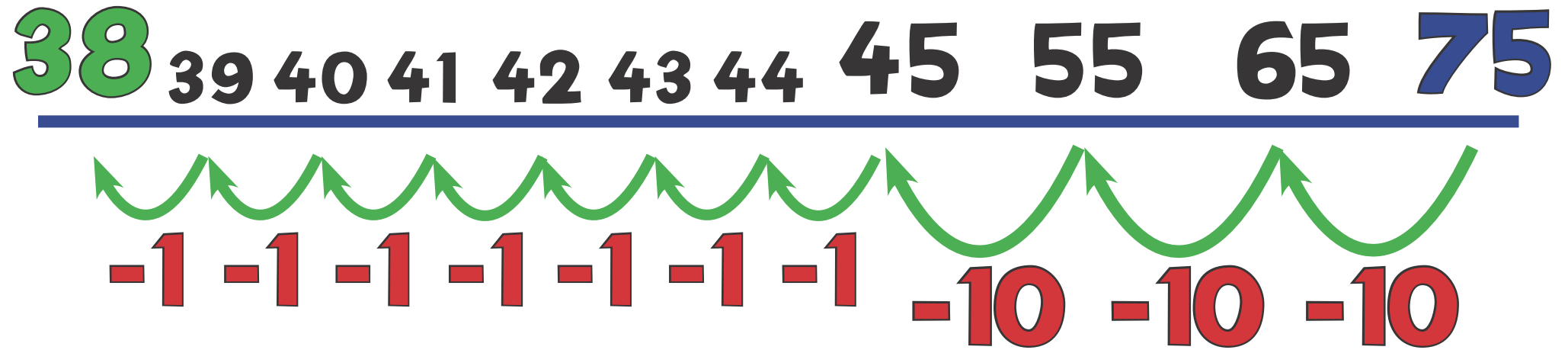


$$87 - 23 = 64$$



S4a: Backwards Bounce

2

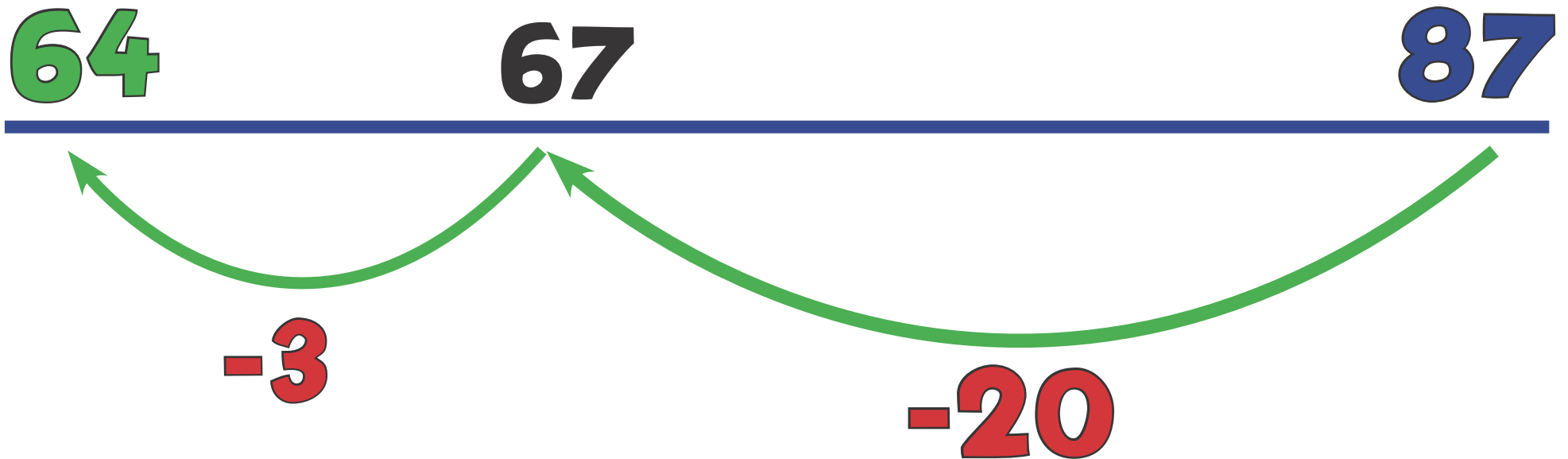


$$75 - 37 = 38$$



S5: Backwards Jump

2

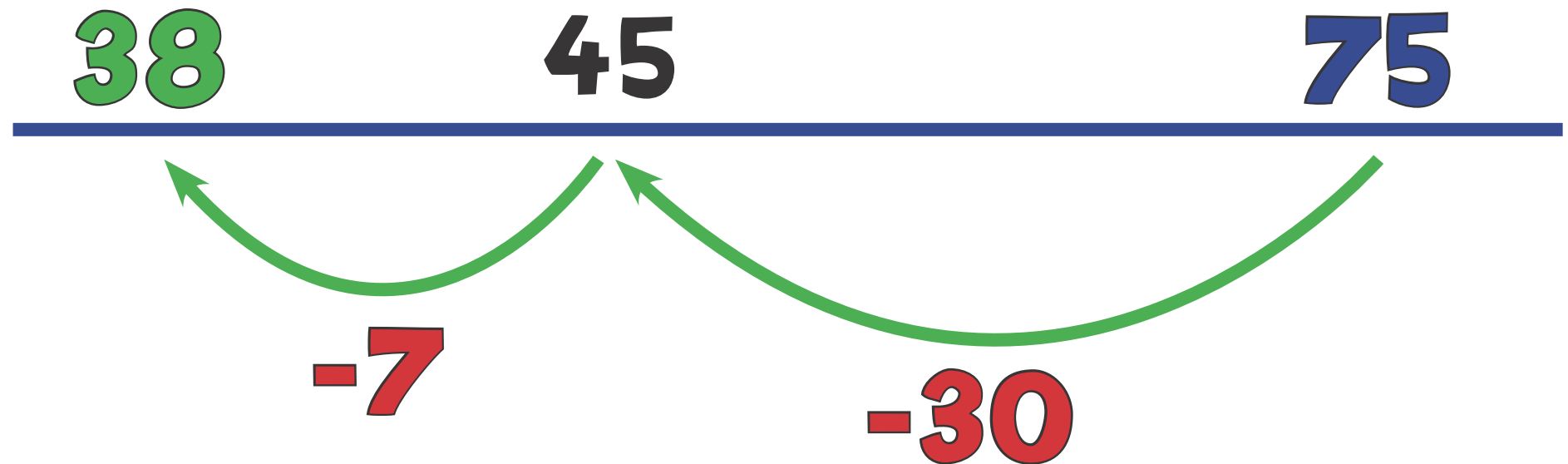


$$87 - 23 = 64$$



S5a: Backwards Jump

2

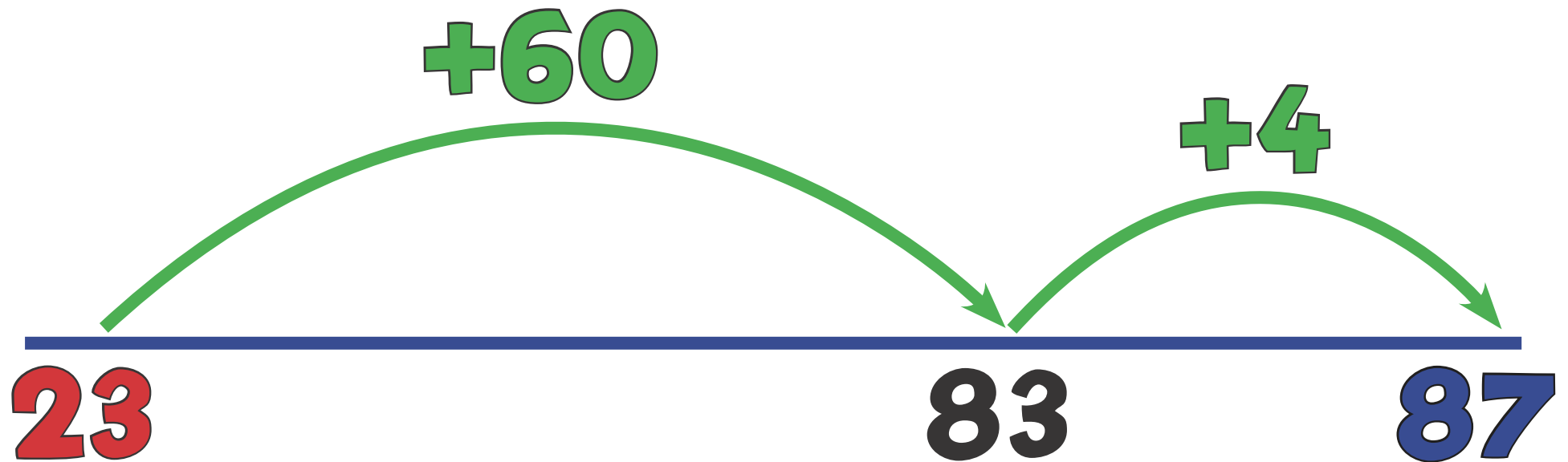


$$75 - 37 = 38$$



S6: 10s Jump, 1s Jump!

2

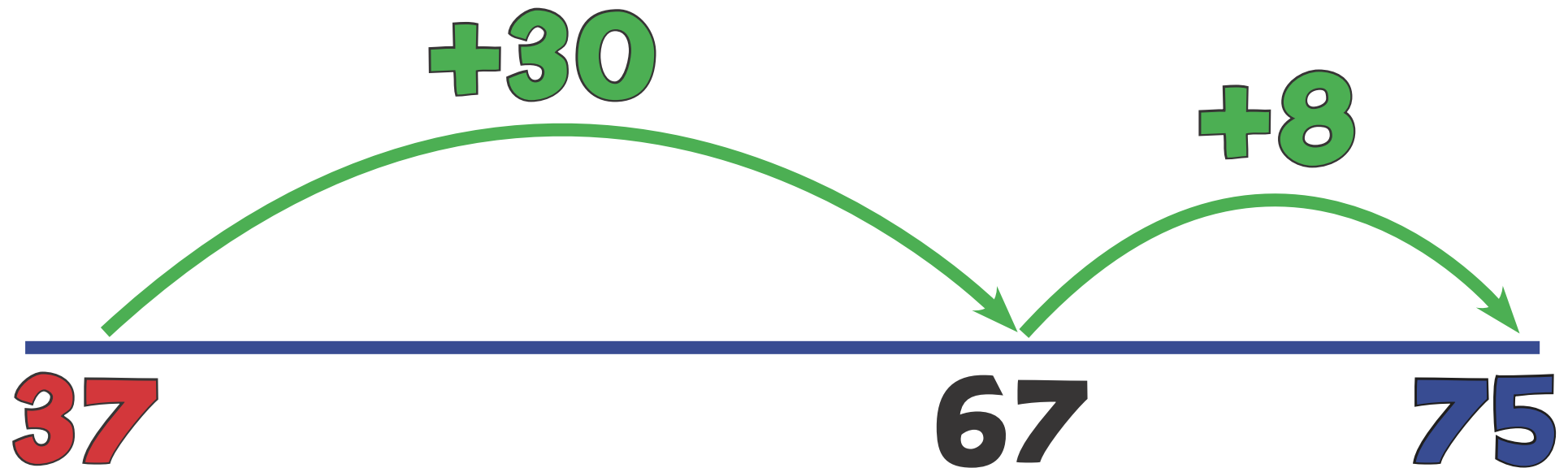


$$87 - 23 = 64$$



S6a: 10s Jump, 1s Jump!

2

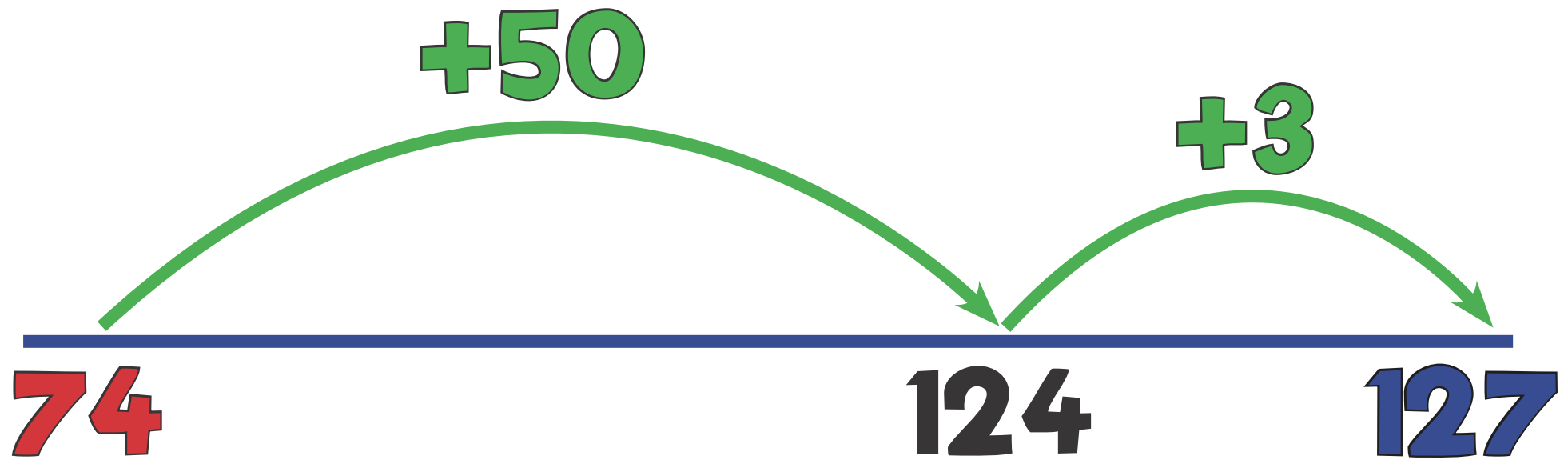


$$75 - 37 = 38$$



S6b: 10s Jump, 1s Jump!

3

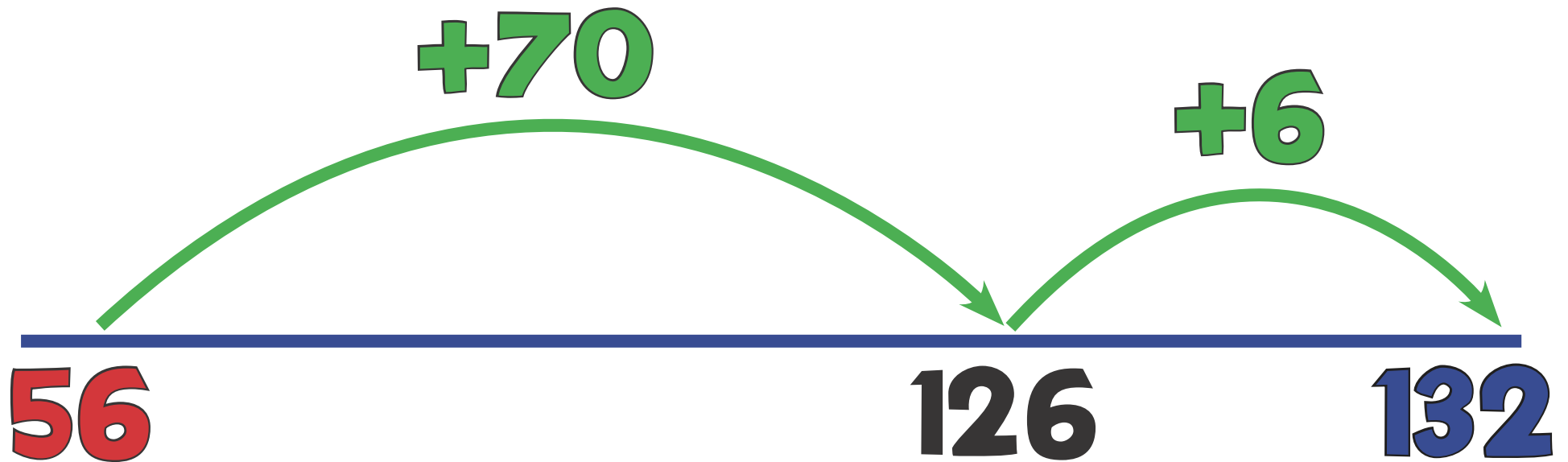


$$127 - 74 = 53$$



S6c: 10s Jump, 1s Jump!

3

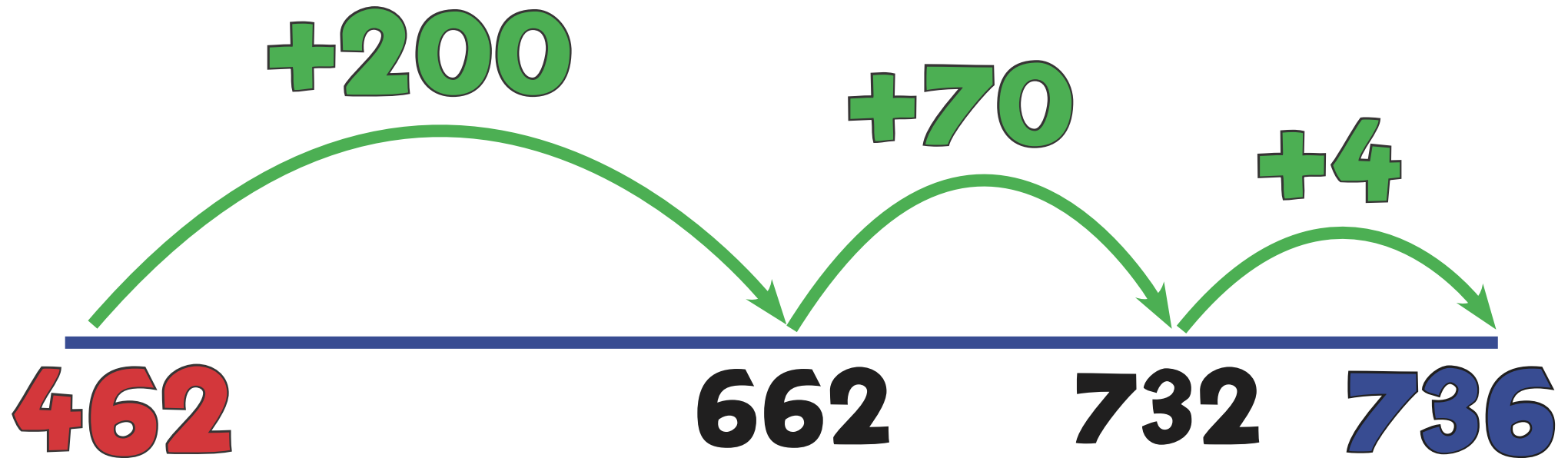


$$132 - 56 = 76$$



S6d: 100s, 10s, 1s Jump

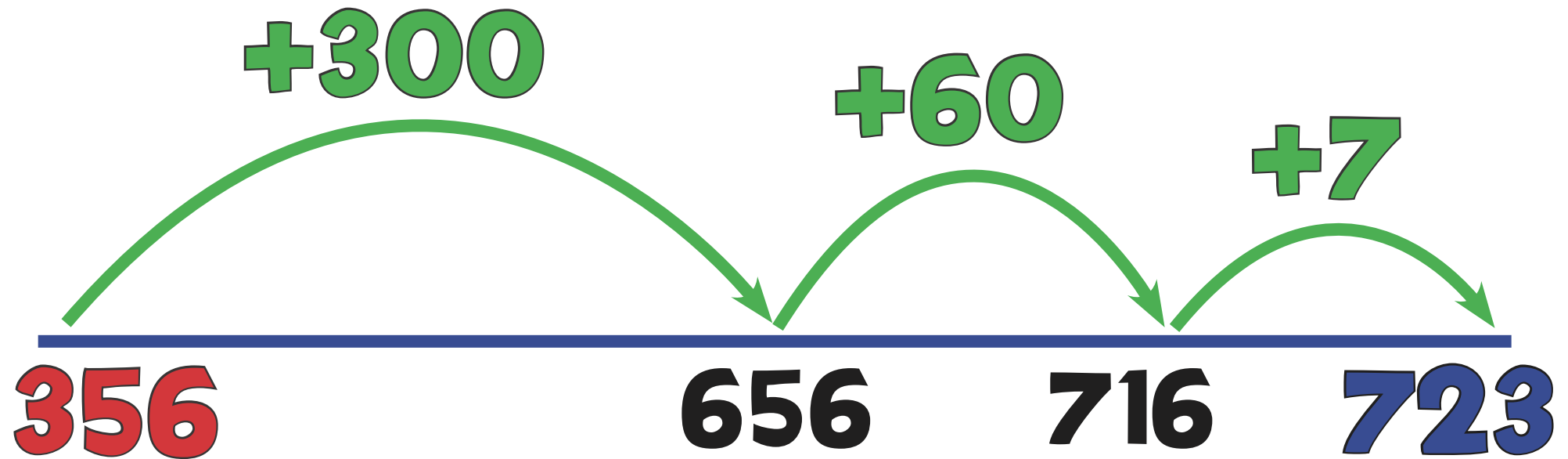
3



$$736 - 462 = 274$$



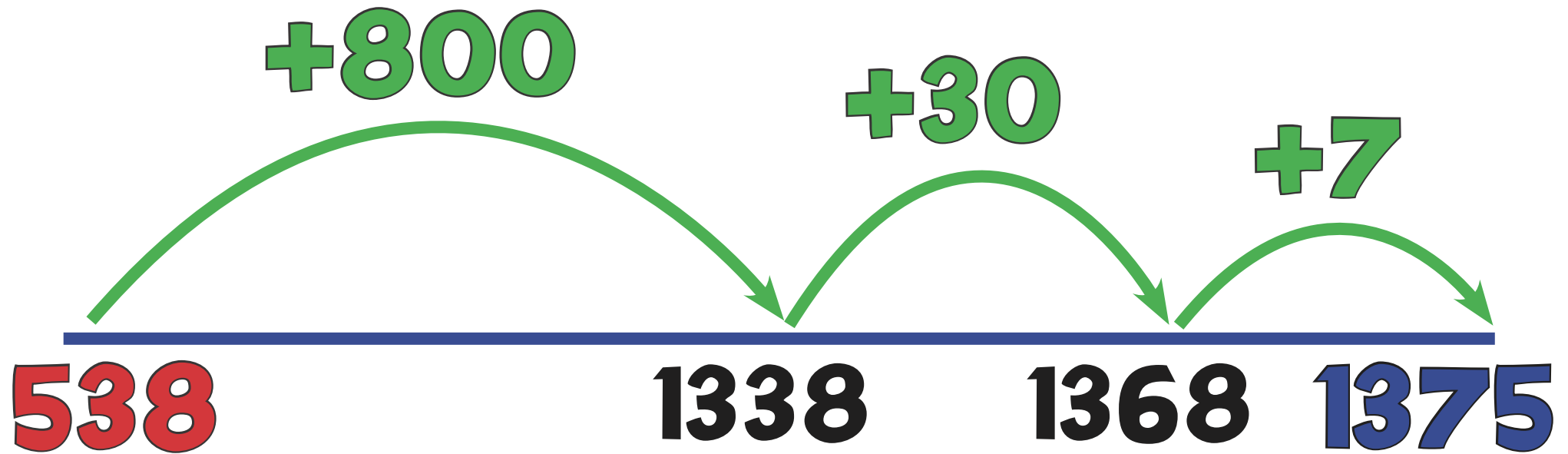
S6e: 100s, 10s, 1s Jump



$$723 - 356 = 367$$



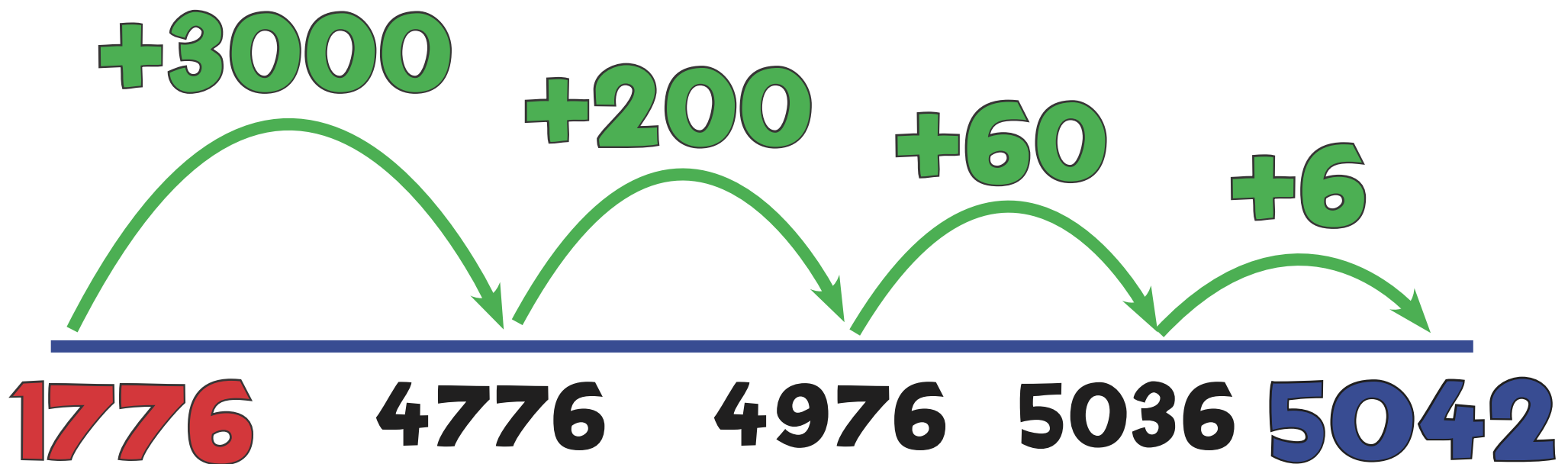
S6f: 100s, 10s, 1s Jump



$$1375 - 538 = 837$$



S6g: 1000s, 100s, 10s, 1s Jump

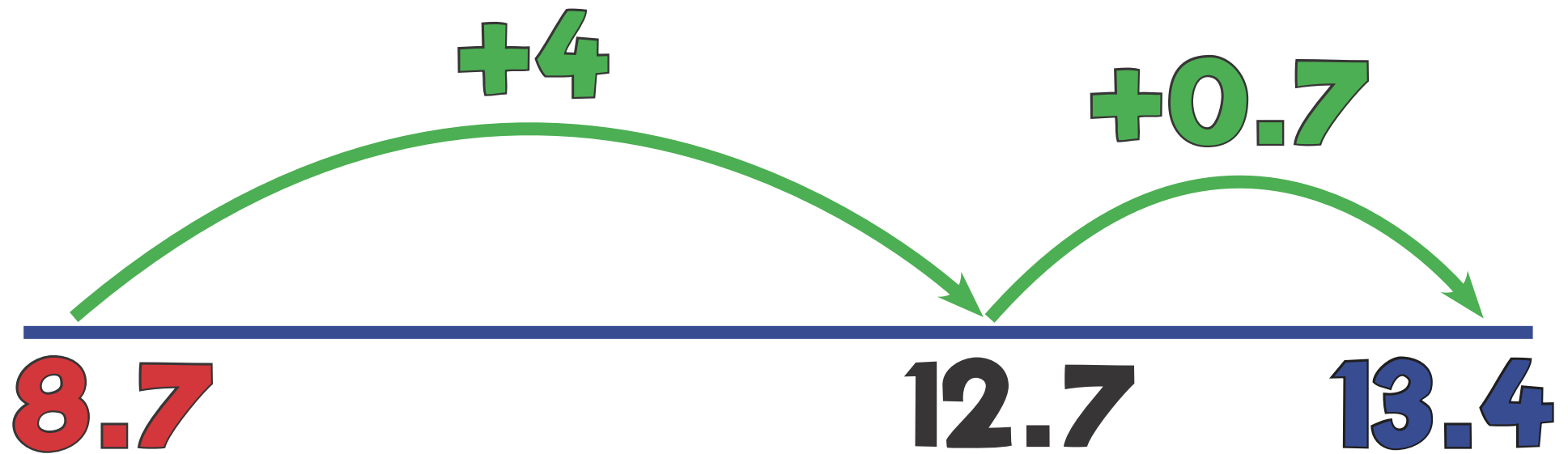


$$5042 - 1776 = 3266$$



S6i: 1s Jump, Tenths Jump!

5

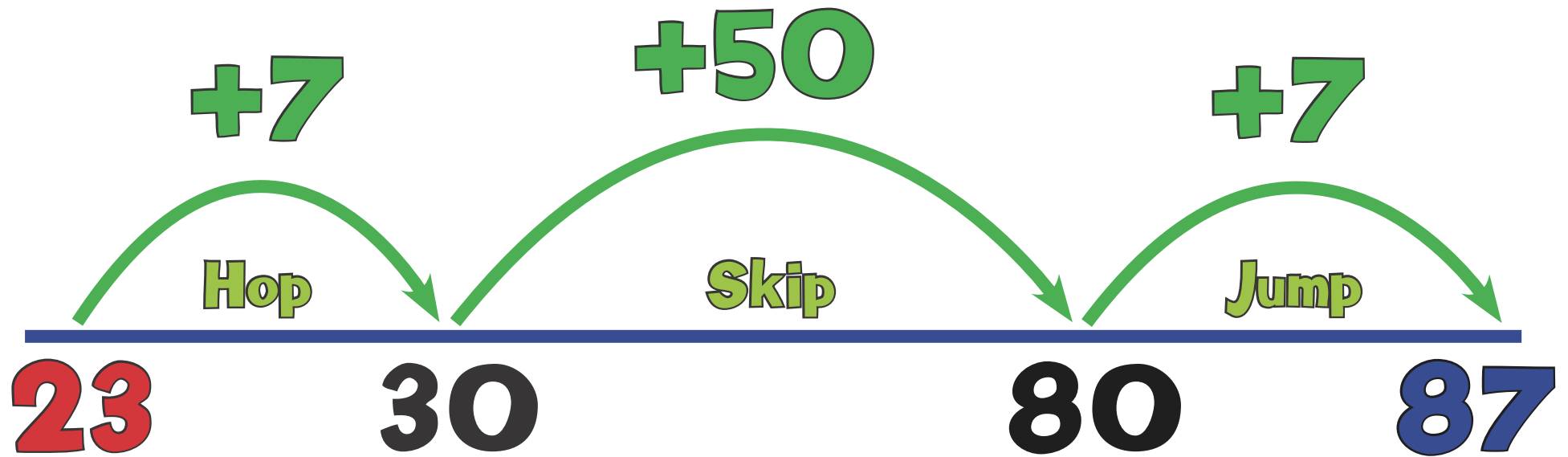


$$13.4 - 8.7 = 4.7$$



S7: Triple Jump!

2

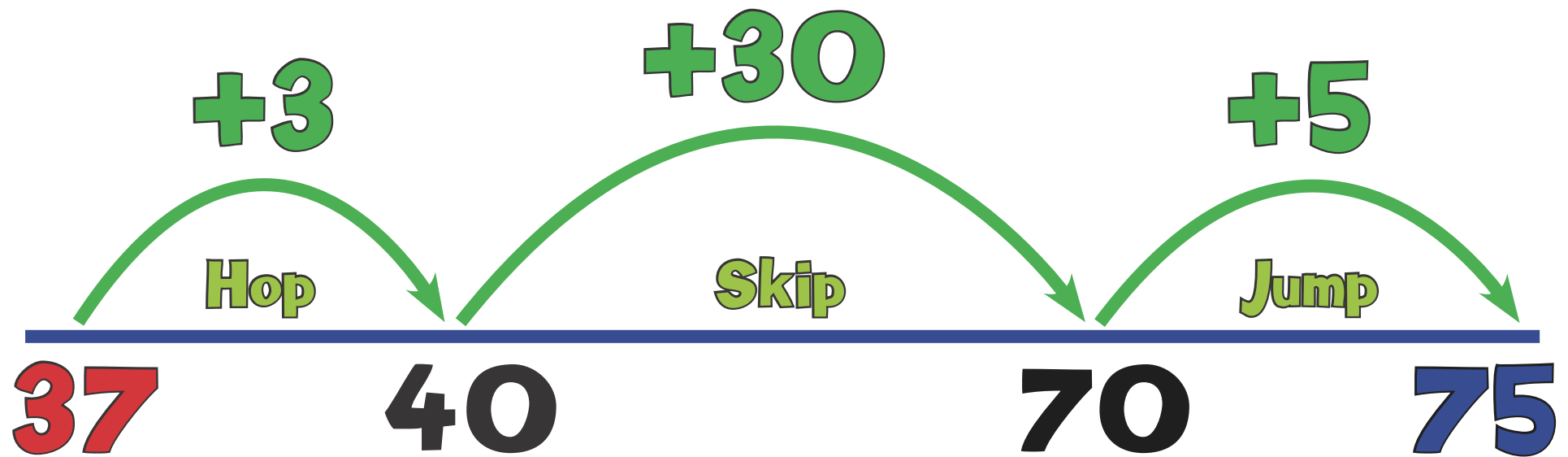


$$87 - 23 = 64$$



S7a: Triple Jump!

2

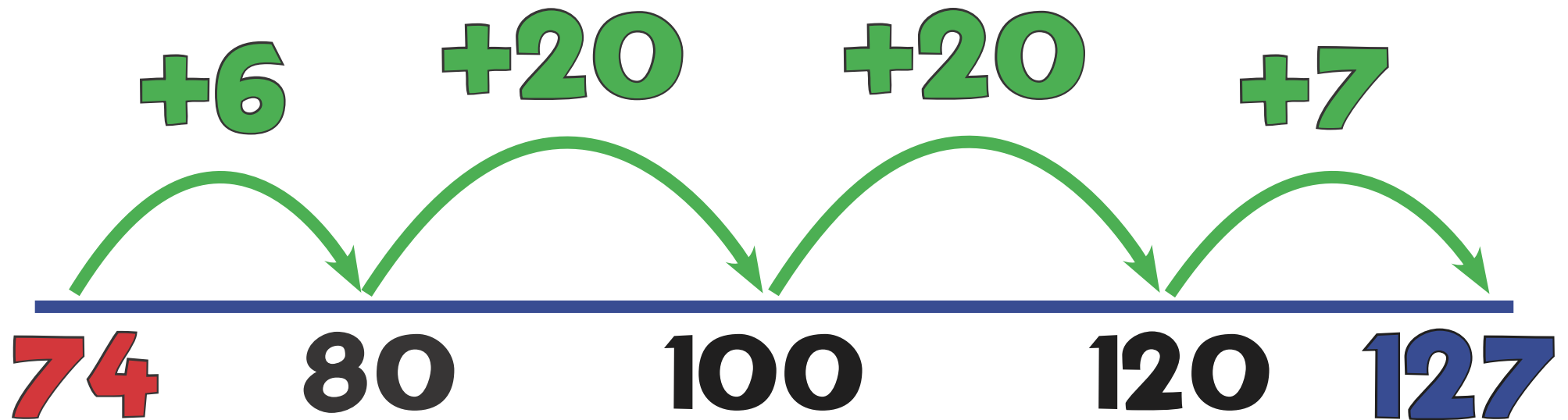


$$75 - 37 = 38$$



S7b: Quad Jump!

3

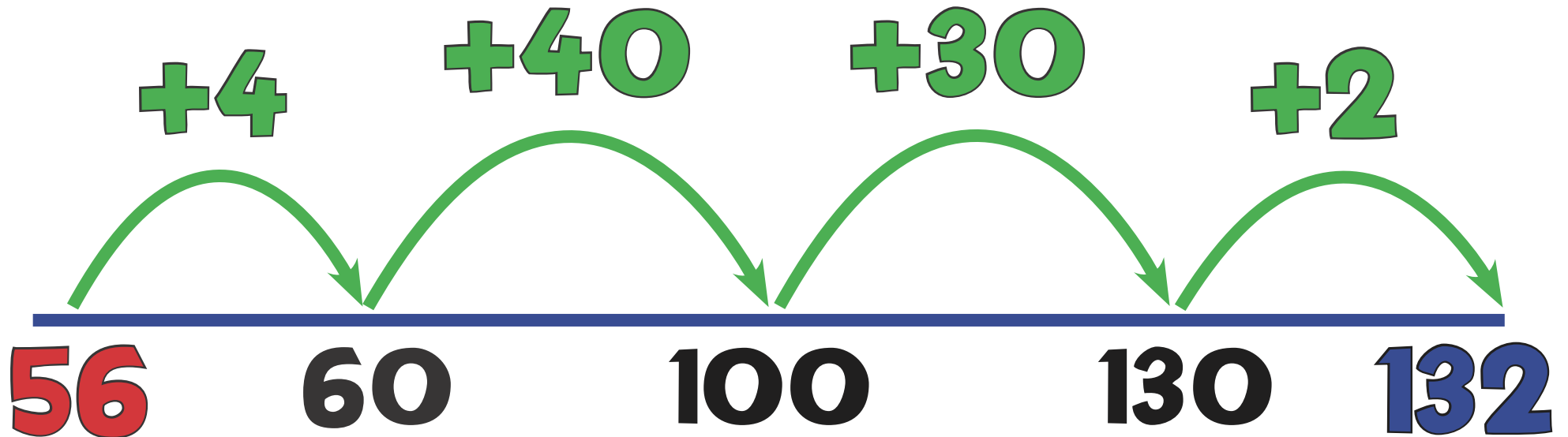


$$127 - 74 = 53$$



S7c: Quad Jump!

3

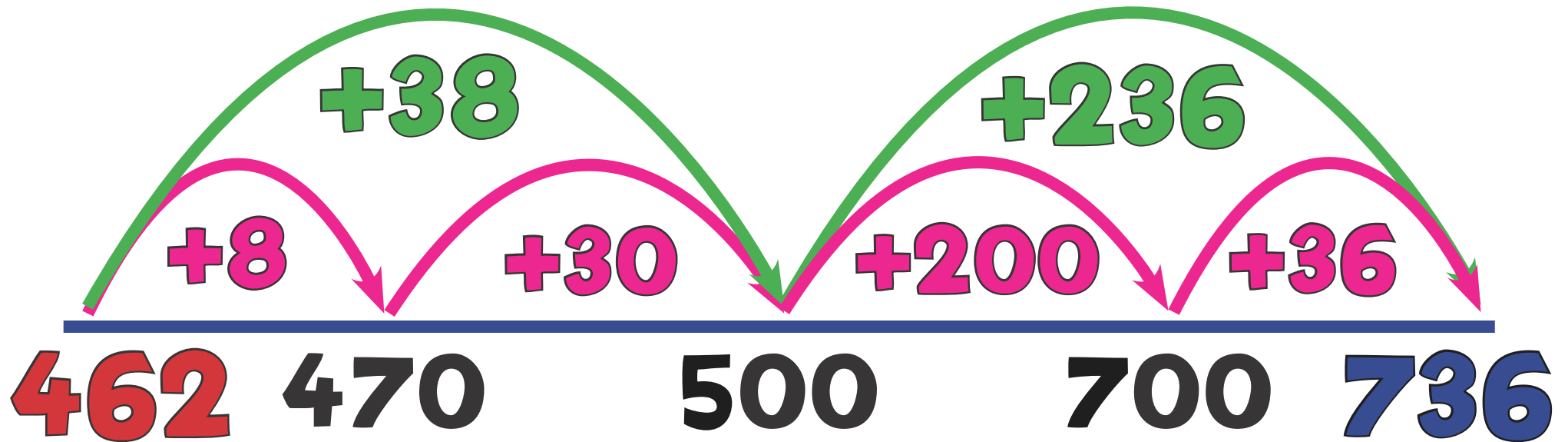


$$132 - 56 = 76$$



S7d: Big Jump!

3

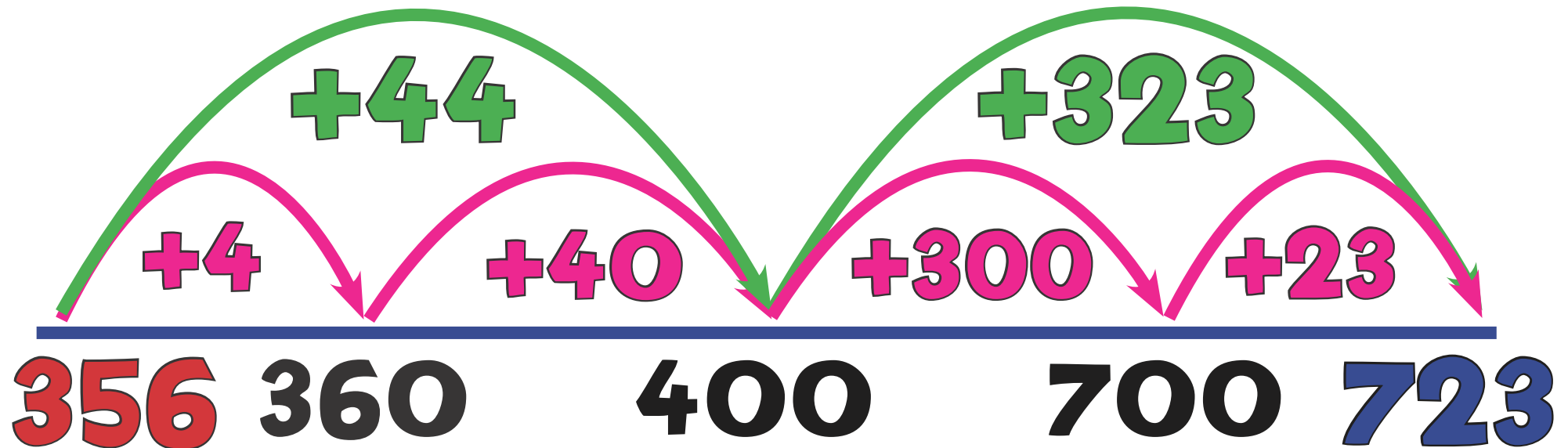


$$736 - 462 = 274$$



S7e: Big Jump!

3

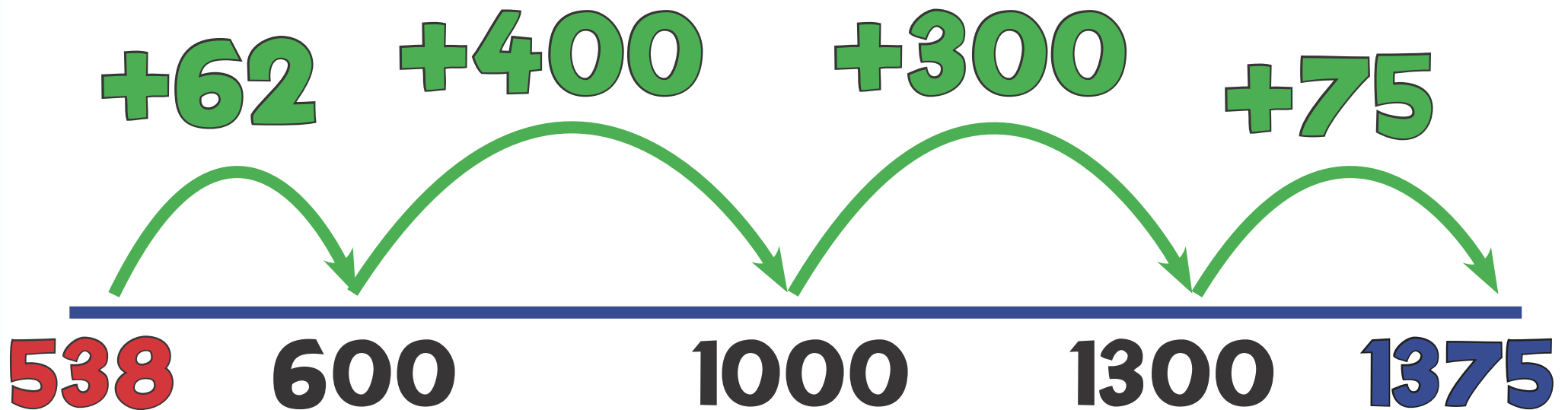


$$723 - 356 = 367$$



S7f: Quad Jump Extreme

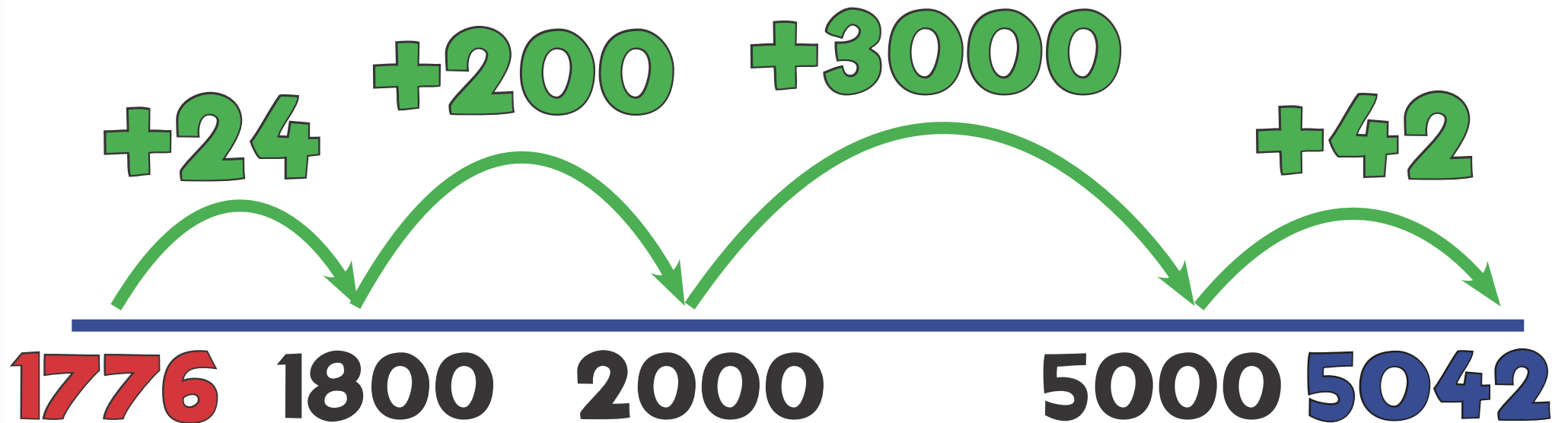
4



$$1375 - 538 = 837$$



S7g Quad Jump Extreme

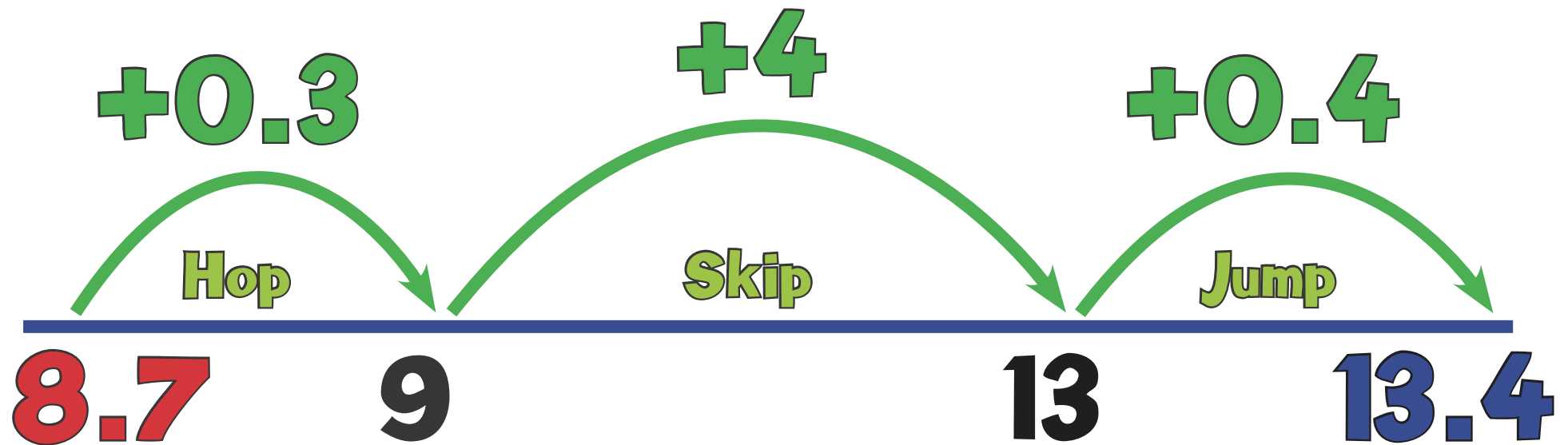


$$5042 - 1776 = 3266$$



S7i: Decimal T-J!

5



$$13.4 - 8.7 = 4.7$$



S8: Part/Whole (S)

2

Partition the Subtrahend

The diagram illustrates the partitioning of the subtrahend 23 into 20 and 3. The number 87 is shown in blue. The number 23 is shown in red and is circled. A dashed purple line connects the 8 in 87 to the 20 in the partitioned subtrahend. The number 64 is shown in green. The partitioned subtrahend is shown as two ovals: one containing 20 and another containing 3.

$$87 - 23 = 64$$

20 3

$$87 - 20 = 67 \quad | \quad 67 - 3 = 64$$



S8a: Part/Whole (S)

2

Partition the Subtrahend

$$75 - 37 = 38$$


$$75 - 35 = 40 \quad | \quad 40 - 2 = 38$$



S8b: Part/Whole (S)

3

Partition the Subtrahend

$$127 - 74 = 53$$

The subtrahend 74 is partitioned into 67 and 7.

$$127 - 67 = 60 \quad | \quad 60 - 7 = 53$$



S8c: Part/Whole (S)

3

Partition the Subtrahend

The diagram illustrates the partitioning of the subtrahend 56 into 32 and 24. The number 132 is shown in blue. The number 56 is shown in red and is circled. A dashed purple line connects the 5 in 56 to the 3 in 32, indicating the borrowing process. The number 76 is shown in green. Below the main equation, the subtrahend 56 is partitioned into 32 and 24, each in a red oval. Lines connect the 56 to these two ovals.

$$132 - 56 = 76$$
$$132 - 32 = 100$$
$$100 - 24 = 76$$



S8d: Part/Whole (S)

3

Partition the Subtrahend

$$736 - 462 = 274$$

The subtrahend 462 is partitioned into 436 and 26.

$$736 - 436 = 300 \quad | \quad 300 - 26 = 274$$



S8e: Part/Whole (S)

3

Partition the Subtrahend

$$723 - 356 = 367$$

The subtrahend 356 is partitioned into 323 and 33.

$$723 - 323 = 400 \quad | \quad 400 - 33 = 367$$



S8f: Part/Whole (S)

4

Partition the Subtrahend

$$1375 - 538 = 837$$

The subtrahend 538 is partitioned into 525 and 13.

$$1375 - 525 = 850 \quad | \quad 850 - 13 = 837$$



S8h: Part/Whole (S)

5

Partition the Subtrahend

$$13.4 - 8.7 = 4.7$$

The diagram illustrates the partitioning of the subtrahend 8.7 into 8.4 and 0.3. A dashed purple line connects the 4 in 13.4 to the 4 in 8.4, illustrating the borrowing process.

$$13.4 - 8.4 = 5 \quad | \quad 5 - 0.3 = 4.7$$



S9a: Part/Whole (M)

2

Partition the Minuend

$$\textcircled{75} - 37 = 38$$

$$\begin{array}{c} \textcircled{40} \quad \textcircled{35} \end{array}$$

$$\begin{array}{r} - 37 \\ \hline \end{array}$$

3

$$3 + 35 = 38$$

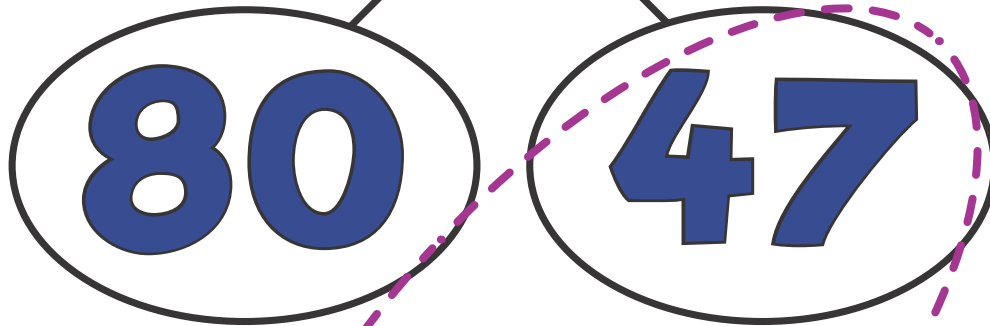


S9b: Part/Whole (M)

3

Partition the Minuend

$$127 - 74 = 53$$



$$\begin{array}{r} - 74 \\ \hline 6 \end{array}$$

$$6 + 47 = 53$$

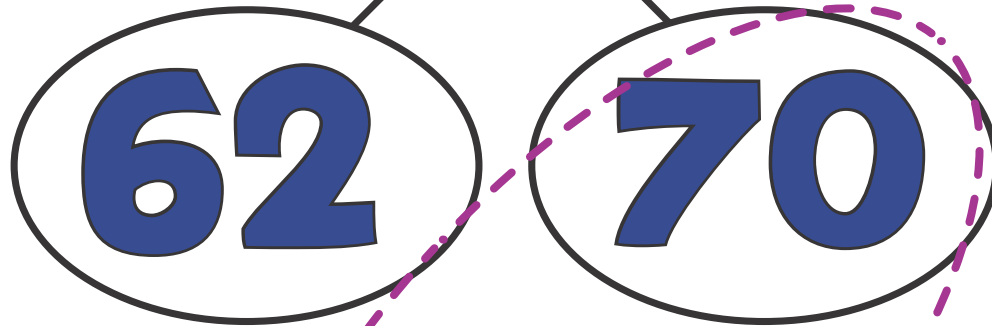


S9c: Part/Whole (M)

3

Partition the Minuend

$$132 - 56 = 76$$



$$\begin{array}{r} - 56 \\ \hline 6 \end{array}$$

$$6 + 70 = 76$$

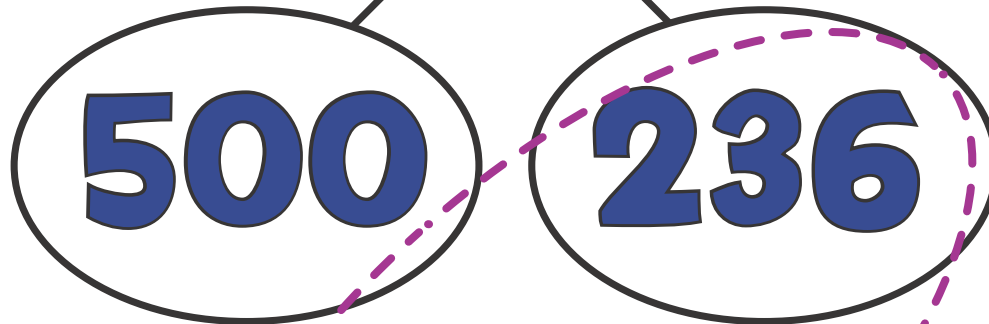


S9d: Part/Whole (M)

3

Partition the Minuend

$$736 - 462 = 274$$



$$\begin{array}{r} - 462 \\ \hline \end{array}$$

38

$$38 + 236 = 274$$

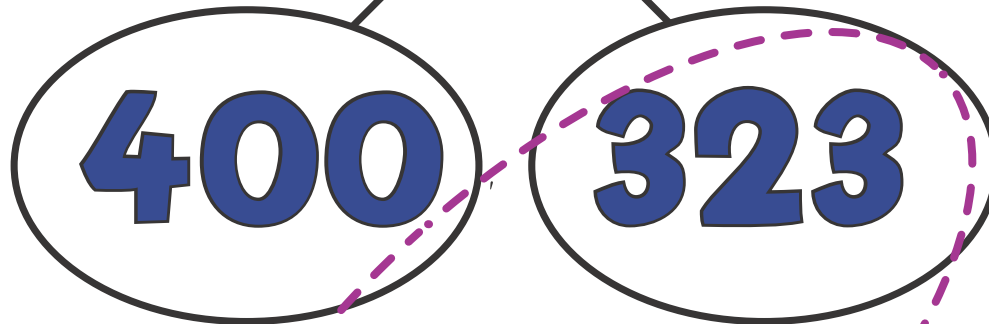


S9e: Part/Whole (M)

3

Partition the Minuend

$$723 - 356 = 367$$



$$\begin{array}{r} - 356 \\ \hline 44 \end{array}$$

$$44 + 323 = 367$$



S9f: Part/Whole (M)

4

Partition the Minuend

$$1375 - 538 = 837$$



$$\begin{array}{r} - 538 \\ \hline 37 \end{array}$$

$$37 + 800 = 837$$



S9g: Part/Whole (M)

4 Partition the Minuend

$$5042 - 1776 = 3266$$

2000 3042

$$\begin{array}{r} - 1776 \\ \hline 224 \end{array}$$
$$224 + 3042 = 3266$$

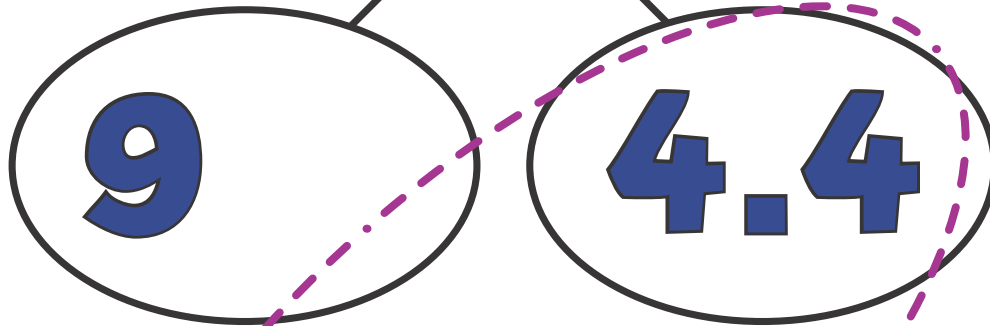


S9h: Part/Whole (M)

5

Partition the Minuend

$$13.4 - 8.7 = 4.7$$



$$\begin{array}{r} - 8.7 \\ \hline 0.3 \end{array}$$

$$0.3 + 4.4 = 4.7$$



S10: Expanded Column

2 Subtraction

$$87 - 23 = 64$$

80	7
20	3
<hr/>	
60	4



S10a: Expanded Column

2 Subtraction

$$75 - 37 = 38$$

60	70	1	5
	30		7
	<hr/>		
	30		8



S10b: Expanded Column

3 Subtraction

$$127 - 74 = 53$$

⁰	¹	
100	20	7
-	70	4
<hr/>		
	50	3



S10c: Expanded Column

3

Subtraction

$$132 - 56 = 76$$

0	120	1
100	30	2
-	50	6
<hr/>		
	70	6



S10d: Expanded Column

3

Subtraction (100, 10, 1s)

$$736 - 462 = 274$$

600	1	
700	30	6
- 400	60	2
<hr/>		
200	70	4



S10e: Expanded Column

3

Subtraction (100, 10, 1s)

$$723 - 356 = 367$$

600	110	1
700	20	3
- 300	50	6
<hr/>		
300	60	7



S11: Column Subtraction

2 Additional

$$\begin{array}{r} \text{10} \quad \text{1} \\ 87 \\ - 23 \\ \hline 64 \end{array}$$



S11a: Column Subtraction

2

$$\begin{array}{r} \text{10} \quad \text{1} \\ \text{6} \text{ } \text{7} \text{ } \text{5} \\ - \text{3} \text{ } \text{7} \\ \hline \text{3} \text{ } \text{8} \end{array}$$



S11b: Column Subtraction

3

$$\begin{array}{r} \begin{array}{ccc} 100 & 10 & 1 \\ 0 & 1 & \\ \hline \end{array} \\ \begin{array}{r} \text{127} \\ - 74 \\ \hline \end{array} \\ \begin{array}{r} \text{53} \end{array} \end{array}$$



S11c: Column Subtraction

3

$$\begin{array}{r} \text{100} \quad \text{10} \quad \text{1} \\ \text{0} \quad \text{12} \quad \text{1} \\ \text{1} \text{ } \text{3} \text{ } \text{2} \\ - \text{56} \\ \hline \text{76} \end{array}$$



S11d: Column Subtraction

3

$$\begin{array}{r} \text{100} \quad \text{10} \quad \text{1} \\ \text{6} \quad \text{1} \\ \text{7} \text{3} \text{6} \\ - \text{4} \text{6} \text{2} \\ \hline \text{2} \text{7} \text{4} \end{array}$$



S11e: Column Subtraction

3

$$\begin{array}{r} \text{100} \quad \text{10} \quad \text{1} \\ \text{6} \quad \text{11} \quad \text{1} \\ \text{7} \text{ } \text{2} \text{ } \text{3} \\ - \text{3} \text{ } \text{5} \text{ } \text{6} \\ \hline \text{3} \text{ } \text{6} \text{ } \text{7} \end{array}$$



S11f: Column Subtraction

4

$$\begin{array}{r} \overset{0}{\cancel{1}}3 - 5 \\ \hline 8 \end{array} \quad \begin{array}{r} \overset{6}{\cancel{7}}5 - 3 \\ \hline 2 \end{array}$$



S11g: Column Subtraction

4

$$\begin{array}{r} \overset{4}{\cancel{5}} \overset{19}{\cancel{0}} \overset{13}{\cancel{4}} \overset{1}{2} \\ - 1776 \\ \hline 3266 \end{array}$$



S11h: Column Subtraction

5

$$\begin{array}{r} \begin{array}{cccccc} & 3 & 1 & 7 & 12 & 1 \\ 7 & \cancel{4} & 2 & \cancel{8} & \cancel{3} & 1 \\ - & 4 & 2 & 7 & 3 & 5 & 8 \end{array} \\ \hline 3 & 1 & 5 & 4 & 7 & 3 \end{array}$$



S11i: Column Subtraction

5

$$\begin{array}{r}
 \begin{array}{c} 10 \quad 1 \quad \blacksquare \quad \frac{1}{10} \\ 0 \quad 12 \quad 1 \\ \cancel{1} \quad \cancel{3} \quad \blacksquare \quad 4 \end{array} \\
 - \quad \begin{array}{c} 8 \quad \blacksquare \quad 7 \end{array} \\
 \hline
 \begin{array}{c} 4 \quad \blacksquare \quad 7 \end{array}
 \end{array}$$



S11j: Column Subtraction

5

$$\begin{array}{r}
 \begin{array}{ccccccc}
 & 10 & 1 & & \frac{1}{10} & \frac{1}{100} & \\
 6 & & 11 & & 13 & 1 & \\
 \cancel{7} & \cancel{2} & . & \cancel{4} & 3 & & \\
 - & 4 & 7 & . & 8 & 5 & \\
 \hline
 2 & 4 & . & 5 & 8 & &
 \end{array}
 \end{array}$$



S11k: Column Subtraction

5

With Decimals

$$12.4 - 5.97 = 6.43$$

	10	1	■	$\frac{1}{10}$	$\frac{1}{100}$
0	11	13	1		
1	2	4	0		
-					
	5	9	7		
<hr/>					
	6	4	3		
<hr/>					

