Year 5

Isolation Pack – **Maths Week 1**

Lesson 1 - Questions

Warm-up

Match the calculations to their answers

3406 + 211 =	5299
2033 + 3265 =	5298
4157 + 1142 =	3657
546 + 3111 =	3617

Addition Problems

Use the place value grids to solve the calculations involving 4-digit numbers. Draw counters in each box to help you, as shown in question a).

a) 2346 + 1213 =

Thousands	Hundreds	Tens	Ones
●●	●●●	●●● ●	●●● ●●●
●	●●	●	●●●

b) 5183 + 3704 =

Thousands	Hundreds	Tens	Ones

c) 1003 + 7263 =

Thousands	Hundreds	Tens	Ones

Reasoning and Problem Solving

Jack is calculating 506 + 243

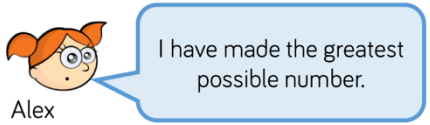
Here is his working out.

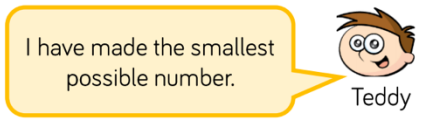
		5	6
+	2	4	3
	2	9	9

Can you spot Jack's mistake?
Work out the correct answer.

Here are three digit cards.

Alex and Teddy are making 3-digit numbers using each card once.

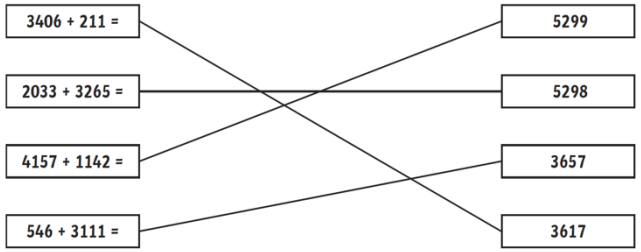




Work out the total of their two numbers.

Lesson 1 - ANSWERS

Warm-up



Addition Problems

a) **2346 + 1213 = 3559**

Thousands	Hundreds	Tens	Ones
●●	●●●	●●● ●	●●● ●●●
●	●●	●	●●●

b) **5183 + 3704 = 8887**

Thousands	Hundreds	Tens	Ones
●●● ●●	●	●●● ●●● ●	●●●
●●●	●●● ●●● ●		●●● ●

c) **1003 + 7263 = 8266**

Thousands	Hundreds	Tens	Ones
●			●●●
●●● ●●● ●	●●	●●● ●●●	●●●

Reasoning and Problem Solving

Jack is calculating 506 + 243

Here is his working out.

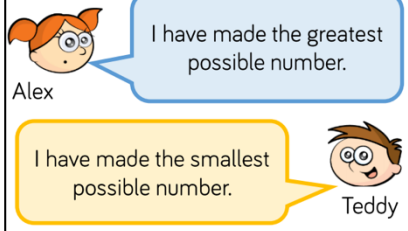
		5	6
+	2	4	3
	2	9	9

Can you spot Jack's mistake?
Work out the correct answer.

Jack hasn't used zero as a place holder in the tens column.
The correct answer should be 749

Here are three digit cards.

Alex and Teddy are making 3-digit numbers using each card once.



Work out the total of their two numbers.

Alex's number is 432
Teddy's number is 234

The total is 666

Lesson 2 - Questions

Warm-up
Complete these column additions.

a)

	3	2	5	8
+	1	2	0	4

b)

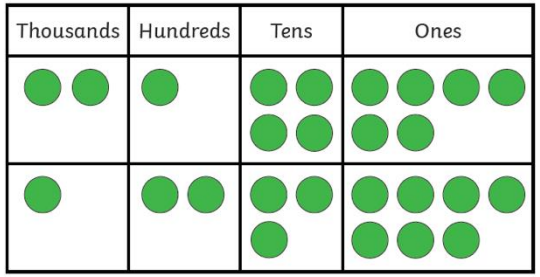
	4	3	4	9
+	2	9	2	0

c)

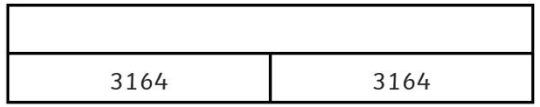
	5	1	6	7
+	2	3	8	1

Addition Problems
Use the diagrams to help solve each calculation.

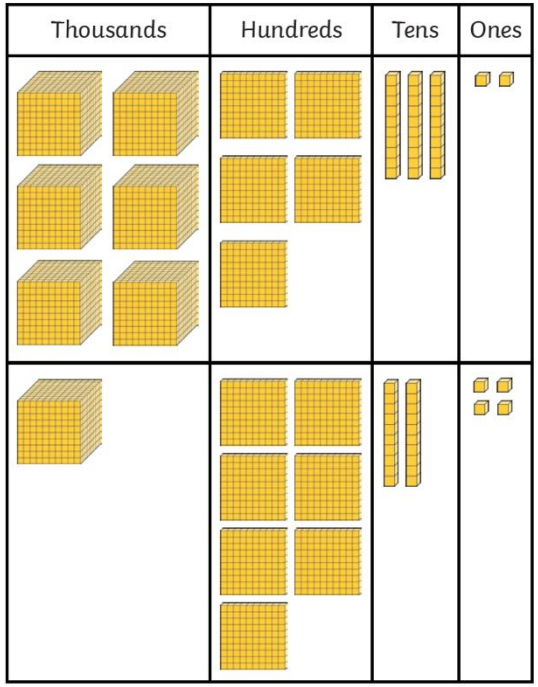
a) 2146 + 1237 =



b) 3164 + 3164 =



c) 6532 + 1724 =



Reasoning and Problem Solving

Rosie adds 2 numbers together that total 4,444

Both numbers have 4 digits.

All the digits in both numbers are even.

What could the numbers be?
Prove it.
How many ways can you find?

Two children completed the following calculation:

1,234 + 345

Dora

My answer is 1,589

My answer is 4,684

Alex

Both of the children have made a mistake in their calculations.
Calculate the actual answer to the question.
What mistakes did they make?

Lesson 2 - ANSWERS

Warm-up

a)

	3	2	5	8
+	1	2	0	4
	4	4	6	2
			1	

b)

	4	3	4	9
+	2	9	2	0
	7	2	6	9
	1			

c)

	5	1	6	7
+	2	3	8	1
	7	5	4	8
		1		

Addition Problems

a) 2146 + 1237 = 3383

b) 3164 + 3164 = 6328

c) 6532 + 1724 = 8256

Reasoning and Problem Solving

Rosie adds 2 numbers together that total 4,444

Both numbers have 4 digits.

All the digits in both numbers are even.

What could the numbers be?
Prove it.
How many ways can you find?

Possible answers:

2,222 + 2,222
2,244 + 2,200
2,224 + 2,220
2,442 + 2,002
2,242 + 2,202
2,424 + 2,020
2,422 + 2,022
2,444 + 2,000

There are more possible pairs. This includes 0 as an even number. Discussion could be had around whether 0 is odd or even and why.

Two children completed the following calculation:

1,234 + 345

Dora

My answer is 1,589

My answer is 4,684

Alex

Both of the children have made a mistake in their calculations.
Calculate the actual answer to the question.
What mistakes did they make?

The actual answer is 1,579
Dora's mistake was a miscalculation for the 10s column, adding 30 and 40 to get 80 rather than 70
Alex's mistake was a place value error, placing the 3 hundred in the thousands column and following the calculation through incorrectly.

Lesson 3 - Questions

Warm-up

Use < or > to compare the total number of coins in each bag.

	1	4	3	5
+	2	1	8	6

< or > ☐ 3012 + 1699

	4	3	8	5
+	3	8	4	2

< or > ☐ 5269 + 1992

	6	1	2	7
+	2	9	4	5

< or > ☐ 2967 + 3978

	3	5	7	4
+	1	5	9	6

< or > ☐ 3298 + 2389

Addition Problems

Use the diagrams to solve the calculations.

a)

Th	H	T	O
●●	●●●●●	●●	●●●
●	●●●	●●	●●●●●

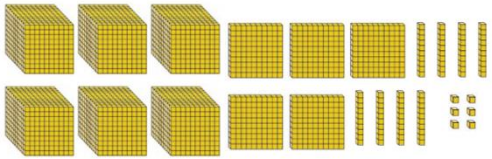
2746 + 1537 = ☐

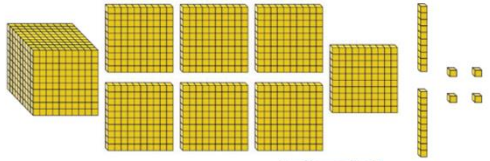
b)

2657	2657

2657 + 2657 = ☐

c)





6586 + 1724 = ☐

Reasoning and Problem Solving

Complete the statements to make them correct.

487 + 368 ◯ 487 + 468

326 + 258 ◯ 325 + 259

391 + 600 = 401 + ___

Explain why you do not have to work out the answers to compare them.

What is the missing 4-digit number?

	Th	H	T	O
	___	___	___	___
+	6	3	9	5
	8	9	4	9

Lesson 3 - ANSWERS

Warm-up

	1	4	3	5
+	2	1	8	6
	3	**6**	**2**	**1**
		1	**1**	

<

3012 + 1699 = **4711**

	4	3	8	5
+	3	8	4	2
	8	**2**	**2**	**7**
	1	**1**		

>

5269 + 1992 = **7261**

	6	1	2	7
+	2	9	4	5
	9	**0**	**7**	**2**
	1		**1**	

>

2967 + 3978 = **6945**

	3	5	7	4
+	1	5	9	6
	5	**1**	**7**	**0**
	1	**1**	**1**	

<

3298 + 2389 = **5687**

Addition Problems

a) 2746 + 1537 = **4283**

b) 2657 + 2657 = **5314**

c) 6586 + 1724 = **8310**

Reasoning and Problem Solving

Complete the statements to make them correct.

487 + 368 ◯ 487 + 468

326 + 258 ◯ 325 + 259

391 + 600 = 401 + ___

Explain why you do not have to work out the answers to compare them.

<

=

590

In the first one we start with the same number, so the one we add more to will be greater.
In the second 325 is one less than 326 and 259 is one more than 258, so the total will be the same.
In the last one 401 is 10 more than 391, so we need to add 10 less than 600.

What is the missing 4-digit number?

	Th	H	T	O
	___	___	___	___
+	6	3	9	5
	8	9	4	9

2,554

Lesson 4 - Questions

Warm-up

1 $4078 + 7806$

2 $3020 + 7033$

3 $8389 + 2094$

4 $1938 + 8398$

Find the missing numbers

1 $2_32 + 31_2 = _28_$

2 $96__ + 6_80 = __197$

3 $25_7 + _39_ = 7_65$

4 $8_2_ + _060 = _08_1$

Reasoning and Problem Solving

Annie, Mo and Alex are working out the solution to the calculation 6,374 + 2,823

Annie's Strategy

6,000 + 2,000 = 8,000
300 + 800 = 110
70 + 20 = 90
4 + 3 = 7
8,000 + 110 + 90 + 7 = 8,207

Mo's Strategy

	6	3	7	4
+	2	8	2	3
	8	1	9	7

Alex's Strategy

	6	3	7	4
+	2	8	2	3
				7
			9	0
	1	1	0	0
	8	0	0	0
	9	1	9	7

Who is correct?

Lesson 4 - ANSWERS

Warm-up

1	11884
2	10053
3	10483
4	10336

Find the missing numbers

1	2132 + 3152 = 5284
2	9617 + 6580 = 16 197
3	2567 + 5398 = 7965
4	8821 + 2060 = 10 881

Reasoning and Problem Solving

Alex is correct with 9,197

Annie has miscalculated 300 + 800, forgetting to exchange a ten hundreds to make a thousand (showing 11 tens instead of 11 hundreds).

Mo has forgotten both to show and to add on the exchanged thousand.

Lesson 5 - Questions

Warm-up

1. Fill in the missing digits.

1 ☐ 5 ☐ + 7 0 0 = 1959

5 ☐ 2 8 − 4 4 0 = 4788

1 ☐ 2 + 6 ☐ = 200

2. Use your maths skills to explain which of these signs should go in the boxes.

≥ ≤ =

2416 + 15 + 15 ☐ 2416 + 30

1904 − 904 ☐ 1914 − 924

2146 − 39 + 42 ☐ 2134 − 49 + 21

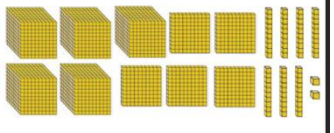
Addition Problems

Captain Fisheye, Captain Shark Bait and Captain Squid Beard used different representations to calculate the number of coins in this bag. Whose answers are correct? Explain and correct any errors.

Captain Fisheye

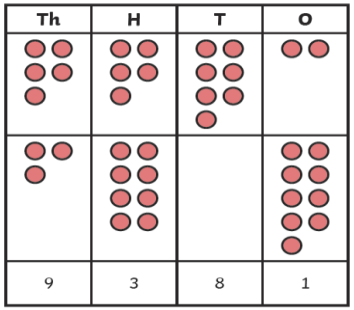
	5	5	7	2
+ 3	8	0	9	
4	3	6	6	2
1		1		

Captain Shark Bait



8	13	7	11

Captain Squid Beard



Reasoning and Problem Solving

Complete:

	Th	H	T	O
	6	?	?	8
+	?	?	8	?
	9	3	2	5

Mo says that there is more than one possible answer for the missing numbers in the hundreds column.
Is he correct?
Explain your answer.

Lesson 5 - ANSWERS

Warm-up

1. 1259 + 700 = 1957
   5228 – 440 = 4788
   132 + 68 = 200

2. 2416 + 15 + 15 = 2416 + 30
   1904 – 904 ≥ 1914 – 924
   2146 – 39 + 42 ≥ 2134 – 49 + 21

Addition Problems

Captain Squid Beard's calculation is correct!

Captain Fisheye's column addition is incorrect: the digits have not been aligned in the correct columns.

Captain Shark Bait's base ten calculation is not correct: there has been no regrouping of the 13 hundreds into 3 hundreds and 1 thousand or of the 11 ones into 1 ten and 1 one.

The **answer to the calculation is 9381** and should be written as:

	1	4	3	5
+	2	1	8	6
	9	3	8	1
	1		1	

Reasoning and Problem Solving

The solution shows the missing numbers for the ones, tens and thousands columns.

6,__38 + 2,__87

Mo is correct. The missing numbers in the hundreds column must total 1,200 (the additional 100 has been exchanged).

Possible answers include:
6,338 + 2,987
6,438 + 2,887