L.O: To Review Addition and Subtraction on a Candy Adventure

7.5.2020/ VII.V.MMXX -There is a clue page and an answer page. Try to only use the clues if you are stuck.

The Sweet Factory

Welcome to The Sweet Factory! Sammy is going to give you a tour of the magnificent factory. He needs some help with addition and subtraction. He needs your help. Before you enter the factory, Sammy needs you to calculate how many sweets have been made. The factory has been running for four years. Below is a table showing how many of each type of sweet was made in each year the factory has been open.

	Raspberry ZigZags	Strawberry Whirls	Chocolate Swirvels	Hazelnut Chewies
Year 1	5,681	4,612	7,384	1,823
Year 2	11,274	9,381	8,133	15,730
Year 3	25,252	28,736	27,632	22,527
Year 4	35,581	46,935	44,194	37,659

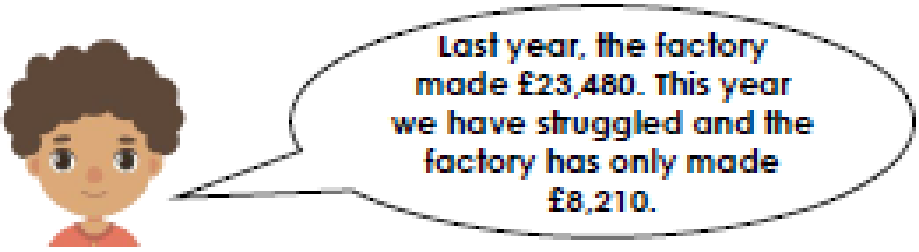
Using the column method:

1a. Calculate how many Raspberry Zigzags and how many Chocolate Swirvels were made altogether in year 3.

1b. Calculate how many Strawberry Whirls and how many Chocolate Swirvels were made altogether in year 4.

Sammy takes you in to the reception. He is worried about whether he can afford to keep the factory running and needs you to help him with his calculations.

Sammy says:



2. Use the column method to calculate the difference in earnings of the factory from last year to this year.

It's time to start your tour of the factory. The first room Sammy takes you to is the Bubblegum room. The bubblegum machine makes 3 different flavours.

3. Each week, the machine makes 12,864 of the grapefruit flavour, 8,231 of the apple flavour and 23,489 of the peach flavour. Round each flavour to the nearest 10, 100 and 1,000 to estimate how many bubblegums are made each week.

Next up, the Melting room! This room is the home of the magnificent melting machine which is full of gooey chocolate. The machine melts hundreds of bars of chocolate each day.

On Mondays, the machine makes 15,682ml of melted chocolate.
On Tuesdays, the machine makes 12,532ml of melted chocolate.

True or False?
4a.15,682ml + 12,532ml gives the same answer as 15,682ml - 12,532ml.
4b. 15,682ml – 12,532ml gives a different answer to 12,532ml + 15,682ml.
Explain your answer.

In the Candy room, the sweets are weighed and packaged so they can be sold. Sammy wants to know how many grams of sweets the machines weigh each week.

On Mondays, Tuesdays and Wednesdays, the machines weigh 10,774g of sweets each day. On Thursdays and Fridays, the machines weigh 8,192g of sweets each day.

5. How many sweets do the machines weigh each week?

You've now come to the end of the tour, but there is one more task Sammy needs you to complete. His step-counting watch has broken and he wants to know how many footsteps you have both done whilst walking around the factory.

The table shows the amount of footsteps you and Sammy have taken in different parts of the factory.

	Entering the factory	Reception	Bubblegum room	Melting room	Candy room
You	1,294	2,521	52,573	3,863	42,485
Sammy	1,376	2,650	51,129	3,872	43,763

6. Calculate who walked the most steps overall.

6a. Who walked the most steps?

6b. What is the difference between the amount of steps you walked and the amount of steps Sammy walked?

Clues:

1a. 25,252+27,632=

1b. 46,935+44,194=

2. When you see ‘difference’ you should use subtraction.

3. Rounding tip: **circle the place value numer** (if it says to the nearest 10, circle the number in the 10 column), and **underline the number to the right**. **If the underlined number is 5 or higher** you will increase the circled number by one. **If the underlined number is 4 or lower** you will leave the circled number as is. **All numbers to the right of the circle become zero**.

4a and b. Solve both equations to see if the statement is true or false.

5. 10,774(3)+ 8,192(2)=

OR 10,774 x 3=

8,192 x 2=

Add those two totals together.

6.Add your steps in the five rooms for one equation. Add Sammy’s steps in the five rooms for the second. Which number is bigger, yours or Sammy’s?

6b. Subtract your number from Sammy’s number.

I would recommend only looking at the answers when you’re done—unless you are really stuck.

Answers:

1a.

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

1b.

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

2.

	£	1 ~~2~~	1 3	4	8	0
-		£	8	2	1	0
	£	1	5	2	7	0

3a. Nearest 10:

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

3b. Nearest 100:

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

3c. Nearest 1,000:

	1	3	0	0	0
+		8	0	0	0
	2	3	0	0	0
	4	4	0	0	0
	1				

4a. False, because 15,682 + 12,532 = 28,214 whereas 15,682 - 12,532 = 3,150 which are not the same amounts.

4b. True, because 15,682 - 12,532 = 3,150 whereas 12,532 + 15,682 = 28, 214 which are different amounts.

5. Mon, Tues and Weds:

	1	0	7	7	4
+	1	0	7	7	4
	1	0	7	7	4
	3	2	3	2	2
		2	2	1	

Thurs and Fri:

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

Weekly:

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

6a. Me:

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

Sammy:

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

Sammy walked more steps.

6b. Sammy walked 54 more steps.

	1	0	2	7	8 ~~9~~	1 0
-	1	0	2	7	3	6
					5	4