

Block 2: Addition of Large Numbers

Session 2A

Complete Daily Review and Quick Teach 2A
Complete 2A – Fact Fluency
Teach Lesson 2A – Addition of Large Numbers

Lesson 2A – Addition of Large Numbers

Lesson Resources	
Teacher Resources	Resources per Student
Classroom whiteboard Workbook – 2A Visualiser	Mini whiteboard Workbook – 2A

Section A – Vertical Addition Review

Teacher Resources - Section A	Resources per Student - Section A
Classroom whiteboard	Mini whiteboard

Step	Instruction
1.	(Note: This lesson requires the use of addition facts. Students not yet proficient in these skills will require support. Fact Support resources can be accessed from empschools.com → Level D → Fact Support .)
2.	Today, we are learning more about addition. What are we learning about?~ You already know how to add 3-digit numbers.
3.	(Write the following on whiteboard) 358 + 324
4.	When I say go, write this problem and solve it. If you finish, try the others. Go.
5.	(Write the following problems alongside) 358 + 324 292 + 546 579 + 476
(Support. Allow students 45-60 seconds to solve as much as they can.)	

6. 3, 2, 1, **Chin it!**
Boards down. (Write solutions as follows)

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

Check it. Wipe it.

Section B – Addition of Large Numbers

Teacher Resources - Section B	Resources per Student - Section B
As above	As above

Step Instruction

1. (Wipe board and write the following)

3 8 2 9
+ 1 6 4 2

2. Today, I'm going to teach you how to add even bigger numbers together.
How many digits are in each number?~ **4**
To solve this problem, we use the same addition process you already know.
3. When we add, we start with the **smallest place value**. What do we start with?~
(Point to ones column) The smallest place value for this problem is the ones.
What is the smallest place value?~ **The ones**
Every problem you solve today will be the same. You will always start by adding the ones.
4. I'm going to solve this problem the way that we normally do.
(Point to each column) Ones, tens, hundreds, or thousands. What do we add first?~ **Ones**
The ones are the smallest place value, so we add them first.
(Point to ones column) The ones problem is 9 plus 2.
(Hand up) What is 9 plus 2? (Pause)~ **11**
5. Is 11 more than 9?~ **Yes**
More than 9?~ **Regrouping time!**
(Write 1 above tens, 1 below ones)

1
3 8 2 9
+ 1 6 4 2

1

6. (Point to tens column) What do we add next?~ **Tens**
The tens problem is 1 plus 2 plus 4.
(Hand up) What is 1 plus 2 plus 4? (Pause)~ **7**

7. Is 7 more than 9?~ **No**
We don't need to regroup the 7.

(Write 7 below tens)

$$\begin{array}{r} 1 \\ 3829 \\ + 1642 \\ \hline 71 \end{array}$$

8. (Point to hundreds column) What do we add next?~ **Hundreds**
The hundreds problem is 8 plus 6.
(Hand up) What is 8 plus 6? (Pause)~ **14**

9. Is 14 more than 9?~ **Yes**
More than 9?~ **Regrouping time!**
I regroup the 14 just like before.
(Write 1 above thousands, 4 below hundreds)

$$\begin{array}{r} 1 \quad 1 \\ 3829 \\ + 1642 \\ \hline 471 \end{array}$$

10. We add the **thousands** next. What do we add next?~
(Point to thousands column) The thousands problem is 1 plus 3 plus 1.
(Hand up) What is 1 plus 3 plus 1? (Pause)~ **5**
(Write 5 below thousands)

$$\begin{array}{r} 1 \quad 1 \\ 3829 \\ + 1642 \\ \hline 5471 \end{array}$$

11. What's the answer?~ **5,471**
We just added these 4-digit numbers together by starting with the smallest place value.

12. (Wipe board and write the following)

$$\begin{array}{r} 4953 \\ + 3254 \\ \hline \end{array}$$

13. When I say go, write this problem and solve it.
If you finish, try the others.
Go.

14. (Write the following problems alongside)

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

(Support. Allow students 60-90 seconds to solve as much as they can.)

15. 3, 2, 1, **Chin it!**
Boards down.

16. (Write solutions as follows)

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

Check it. Wipe it.

17. (Wipe board and write the following)

3 7 2 4 8
+ 2 1 8 9 0

We can use the same process to add **any** two numbers together.
Here are some 5-digit numbers. We add them in the same way.
Do we start with the **smallest** or largest place value?~

18. You're going to help me solve this problem.
We start with the smallest place value.
(Point to ones column) What is 8 plus 0?~ **8**
Is 8 more than 9?~ **No**
(Write **8** below ones)

19. (Point to tens column) What is 4 plus 9? (Pause)~**13**
Is 13 more than 9?~ **Yes**
More than 9?~ **Regrouping time!**
(Write **1** above hundreds, **3** below tens)

20. (Point to hundreds column) What is 1 plus 2 plus 8? (Pause)~**11**
Is 11 more than 9?~ **Yes**
More than 9?~ **Regrouping time!**
(Write **1** above thousands, **1** below hundreds)

21. (Point to thousands column) What is 1 plus 7 plus 1? (Pause)~**9**
Is 9 more than 9?~ **No**
(Write **9** below thousands)

22. (Point to ten thousands column) What is 3 plus 2? (Pause)~**5**
Is 5 more than 9?~ **No**
(Write **5** below ten thousands)

23. What's the answer?~ **59,138**
We just added these numbers by starting from the smallest place value.

24. (Wipe board and write the following)

$$\begin{array}{r} 4\ 7\ 2\ 8\ 3 \\ +\ 1\ 7\ 4\ 4\ 3 \\ \hline \end{array}$$

25. When I say go, write this problem and solve it.
The next problem will have 6-digit numbers, but we use the same process to solve it.
Go.

26. (Write the following problems alongside)

$$\begin{array}{r} 4\ 7\ 2\ 8\ 3 \\ +\ 1\ 7\ 4\ 4\ 3 \\ \hline \end{array} \quad \begin{array}{r} 2\ 2\ 6\ 9\ 5\ 7 \\ +\ 5\ 3\ 2\ 5\ 2\ 6 \\ \hline \end{array} \quad \begin{array}{r} 5\ 7\ 2\ 8\ 9\ 4 \\ +\ 3\ 8\ 7\ 0\ 8\ 8 \\ \hline \end{array}$$

(Support. Allow students 90-120 seconds to solve as much as they can.)

27. 3, 2, 1, **Chin it!**
Boards down.

28. (Write solutions as follows)

$$\begin{array}{r} 1\quad 1 \\ 4\ 7\ 2\ 8\ 3 \\ +\ 1\ 7\ 4\ 4\ 3 \\ \hline 6\ 4\ 7\ 2\ 6 \end{array} \quad \begin{array}{r} 1\quad 1 \\ 2\ 2\ 6\ 9\ 5\ 7 \\ +\ 5\ 3\ 2\ 5\ 2\ 6 \\ \hline 7\ 5\ 9\ 4\ 8\ 3 \end{array} \quad \begin{array}{r} 1\quad 1\ 1 \\ 5\ 7\ 2\ 8\ 9\ 4 \\ +\ 3\ 8\ 7\ 0\ 8\ 8 \\ \hline 9\ 5\ 9\ 9\ 8\ 2 \end{array}$$

29. Eyes up.
Check it. Wipe it.

30. (Wipe board and write the following)

$$\begin{array}{r} 5\ 8\ 2\ 4\ 3 \\ +\ 4\ 3\ 4\ 0 \\ \hline \end{array}$$

In this problem, the top number has more digits than the bottom number.
We use the same process to solve it.
Do we start with the **smallest** or largest place value?~
That's right. Start from the smallest place value.

31. (Point to ones column) What is 3 plus 0?~ **3**
(Write **3** below ones)
(Point to tens column) What is 4 plus 4?~ **8**
(Write **8** below tens)
(Point to hundreds column) What is 2 plus 3?~ **5**
(Write **5** below hundreds)
32. (Point to thousands column) What is 8 plus 4?~ **12**
12 is more than 9, so we need to regroup.
(Write **1** above ten thousands, **2** below thousands)

33. (Point to ten thousands column)
There is no bottom number. When this happens, we add nothing.
What is 1 plus 5?~ **6**
(Write **6** below ten thousands)
-

34. What's the answer?~ **62,583**
It doesn't matter if the numbers have different amounts of digits.
Start from the smallest place value.
-

35. (Wipe board, write the following)

$$\begin{array}{r} 651 \\ + 4325 \\ \hline \end{array}$$

36. In this problem, the bottom number has more digits.
(Point to ones column) What is 1 plus 5?~ **6**
(Write **6** below ones)
(Point to tens column) What is 5 plus 2?~ **7**
(Write **7** below tens)
(Point to hundreds column) What is 6 plus 3?~ **9**
(Write **9** below hundreds)
-

37. (Point to thousands column) The 4 is by itself.
We add nothing to it.
(Write **4** below thousands)
What's the answer?~ **4,976**
-

38. (Wipe board and write the following)

$$\begin{array}{r} 79233 \\ + 4540 \\ \hline \end{array}$$

39. When I say go, write this problem and solve it.
If you finish, try the others.
Go.
-

40. (Write the following problems alongside)

$$\begin{array}{r} 79233 \\ + 4540 \\ \hline \end{array} \quad \begin{array}{r} 35729 \\ + 863052 \\ \hline \end{array} \quad \begin{array}{r} 467402 \\ + 8766 \\ \hline \end{array}$$

(Support. Allow students 90-120 seconds to solve as much as they can.)

41. **3, 2, 1, Chin it!**
Boards down.
-

42. (Write solutions as follows)

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

Check it. Wipe it.

43. It doesn't matter if the numbers have 3, 4, or **10** digits.
 It doesn't even matter if the numbers each have a different amount of digits.
 We use the same process to add them every time.
 We start from the smallest place value.

Section C – Independent Practice

Teacher Resources - Section C	Resources per Student - Section C
Workbook – 2A Visualiser	Workbook – 2A

Step	Instruction
1.	(Remove whiteboards) (Place Workbook - 2A under visualiser) Open your workbook to 2A. (Check) This page is full of addition problems to solve.
2.	When I say go, solve Problem A. Remember to start from the smallest place value. Go. (Support)
3.	Pencils down. (Write 5268 for Problem A) The answer to Problem A is 5,268. Check it.
4.	Solve the rest of the problems now. (Support students as they work independently)
5.	(Conclude lesson by correcting together, then reading the final step below.)
6.	You just added some big numbers together! Remember, the process is the same no matter how many digits we are working with. Soon, I'll teach you how to add 3 or more different numbers together.

Student Workbook Answers:

Page 1: **A.** 5,268 **B.** 4,983 **C.** 88,251 **D.** 71,153 **E.** 74,114 **F.** 34,741 **G.** 690,939 **H.** 720,296 **I.** 482,623
J. 737,810 **K.** 438,374 **L.** 336,227 **M.** 905,510 **N.** 348,231 **O.** 804,279 **P.** 87,477,071 **Q.** 10,354,747,695

This concludes your maths session for today.