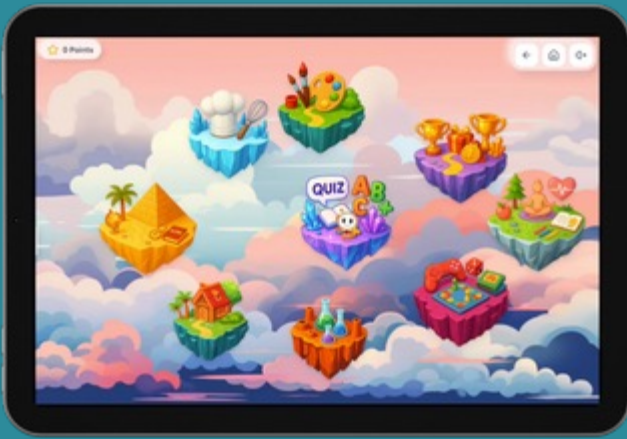


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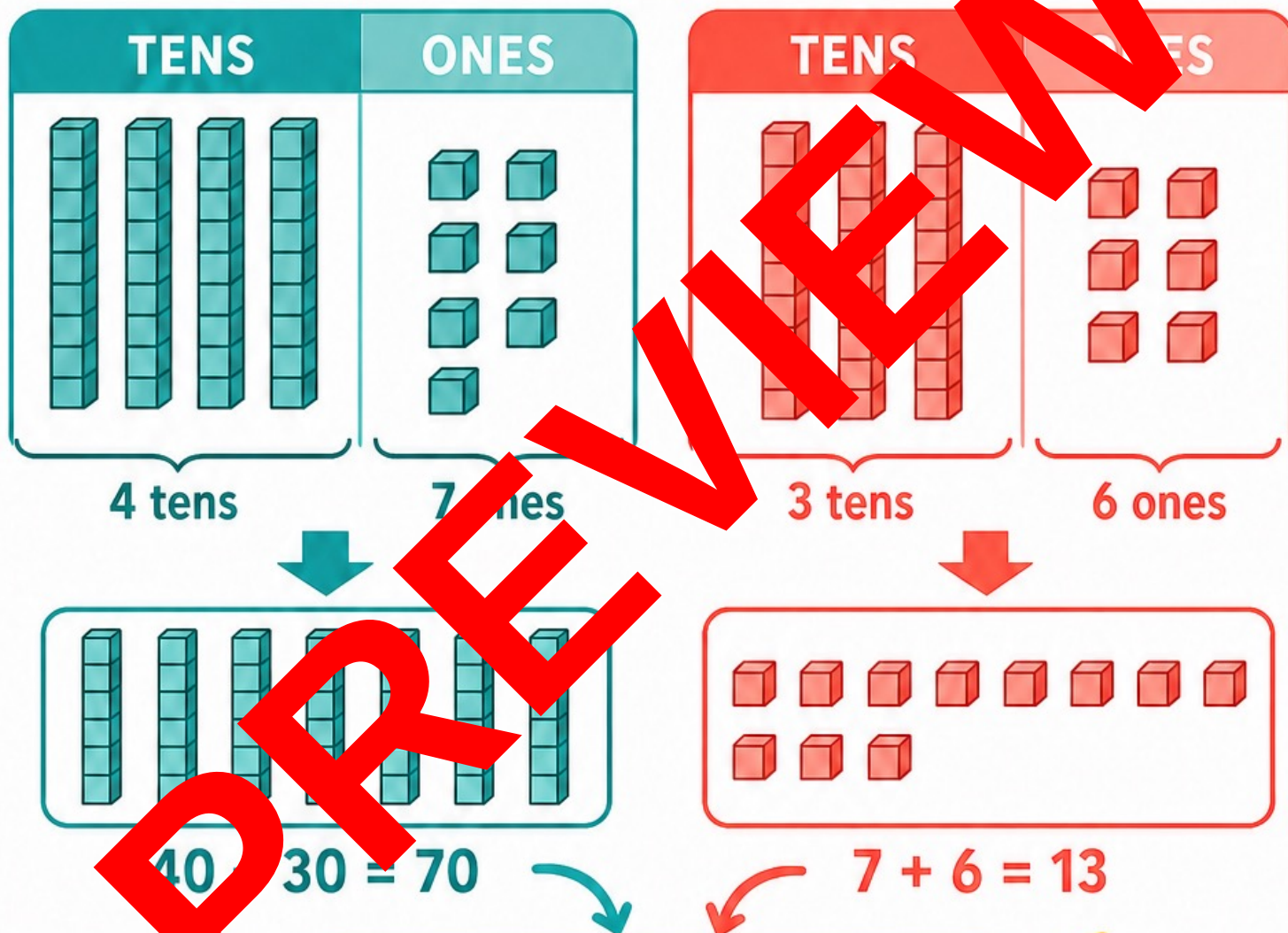
Addition Strategies – Year 3

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SPLIT STRATEGY

$$47 + 36$$

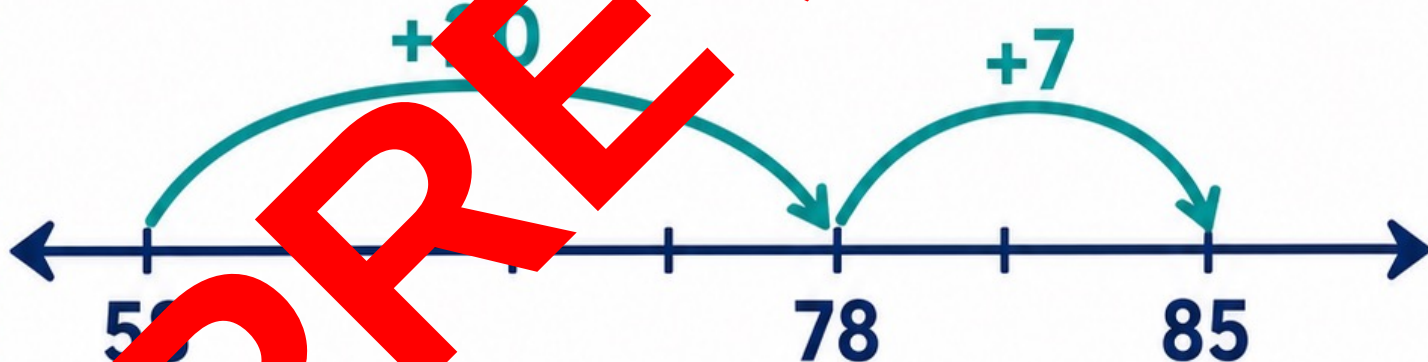


$$70 + 13 = 83$$

1. Partition each addend by place value.
2. Add matching place values.
3. Combine the partial sums.

JUMP STRATEGY

$$58 + 27 = 85$$



1. Start with the larger addend.



2. Partition the other addend.



3. Add each part as a jump.



COMPENSATION

WORKED EXAMPLE

$$49 + 36$$

BEFORE (ADJUST)

$$49 + 36$$

$$\begin{array}{c} \vdots \\ (+1) \\ \downarrow \end{array}$$

$$50$$

49 adjusted by +1
to make 50

AFTER (COMPENSATE)

$$50 + 36$$

$$50 + 36 = 86$$

$$\begin{array}{c} \vdots \\ (-1) \\ \downarrow \end{array}$$

$$86 - 1 = 85$$

Compensate by -1
to get the final answer.

1. Adjust to a friendly number.

$$49 \rightarrow (+1) \rightarrow 50$$

2. Add.

$$50 + 36 \rightarrow 50 + 36 = 86$$

3. Compensate for the adjustment.

$$86 \rightarrow (-1) \rightarrow 86 - 1 = 85$$



WRITTEN ★ ALGORITHM ★

	1	
	TENS	ONES
	6	7
+	5	8
	12	5

1
Add the ones first and regroup.

2
Add the tens.

PLACE-VALUE
ALIGNMENT

	TENS	ONES
	•	•
	•	•
+	•	•
	•	•
	•	•

1

Line up place values.

2

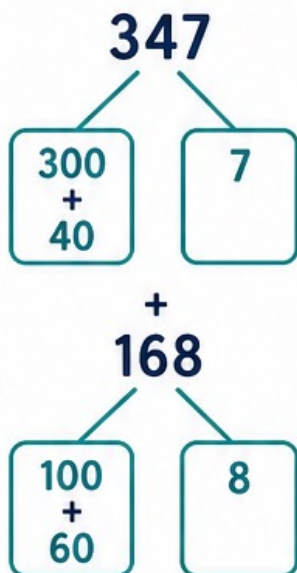
Add the ones and regroup.

3

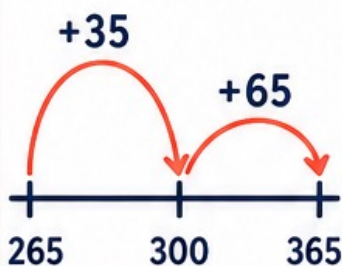
Add the tens.

CHOOSE • SOLVE • CHECK

SPLIT



JUMP



COMPENSATE

198

+2 ↓

200 + 237

↓

435

WRITTEN ALGORITHM

1	T	0
1	9	8
2	3	7
4	3	5

1



Which strategy fits these numbers?

2



Can I show my steps?

3



Is my answer reasonable?

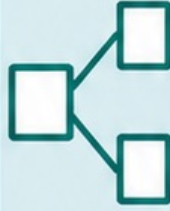


$198 + 237 \rightarrow \text{COMPENSATE } 200 - 2$

$200 + 237 - 2 = 435$



STRATEGY SORT AND SOLVE



SPLIT

Partition by place value, then combine.



JUMP

Start larger, then add place-value jumps.



COMPENSATE

Adjust to a friendly number, then correct.

H				O	
---	--	--	--	---	--

WRITTEN ALGORITHM

Align place values and regroup when needed.



Sort each equation card under a strategy that would be efficient.
Some cards may have more than one good home. Explain one choice to a partner.



STRATEGY SORT AND SOLVE • EQUATION CARDS



$$34 + 28$$



$$47 + 36$$



$$59 + 23$$



$$67 + 18$$



$$124 + 235$$



$$243 + 158$$



$$198 + 46$$



$$299 + 185$$



$$57 + 66$$



$$75 + 29$$



$$345 + 278$$



$$458 + 167$$



$$49 + 38$$



$$297 + 186$$



$$539 + 274$$

RACE TO 1,000

ADDITION STRATEGY GAME

0

1,000

Start at 0. Draw one card. Add it to your running total using any efficient strategy. Explain your thinking to your partner. The first to reach or pass 1,000 wins.

PLAYER 1

ROUND	PREVIOUS TOTAL	CARD	NEW TOTAL	STRATEGY
1				
2				
3				
4				
5				
6				

PLAYER 2

ROUND	PREVIOUS TOTAL	CARD	NEW TOTAL	STRATEGY
1				
2				
3				
4				
5				
6				

RACE TO 1,000 • ADDEND CARDS

48



67



79



95



126



138



145



157



168



174



185



196



207



218



229



236



247



258



269



275



286



297



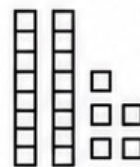
315



328



SPLIT STRATEGY PRACTICE • 2-DIGIT ADDITION



Name: _____

Date: _____

Partition each addend into tens and ones. Add the parts, then combine the partial sums.

WORKED REMINDER

$$32 + 25$$

$$30 + 20 = 50$$

$$2 + 5 = 7$$

$$50 + 7 = 57$$

1. $46 + 27$

TENS

ONES

TOTAL

2. $54 + 36$

TENS

ONES

TOTAL

3. $72 + 19$

TENS

ONES

TOTAL

4. $64 + 28$

TENS

ONES

TOTAL

5. $37 + 55$

TENS

ONES

TOTAL

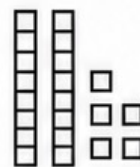
6. $83 + 18$

TENS

ONES

TOTAL

SPLIT STRATEGY PRACTICE • 2-DIGIT ADDITION



Name: _____

ANSWERS

Date: _____

Partition each addend into tens and ones. Add the parts, then combine the partial sums.

WORKED REMINDER

$$32 + 25$$

$$30 + 20 = 50$$

$$2 + 5 = 7$$

$$50 + 7 = 57$$

1. $46 + 27$

TENS

$$\begin{array}{r} 40 + 20 \\ = 60 \end{array}$$

ONES

$$\begin{array}{r} 6 + 7 \\ = 13 \end{array}$$

TOTAL

$$\begin{array}{r} 60 + 13 \\ = 73 \end{array}$$

2. $55 + 39$

TENS

$$\begin{array}{r} 50 + 30 \\ = 80 \end{array}$$

ONES

$$\begin{array}{r} 5 + 9 \\ = 14 \end{array}$$

TOTAL

$$\begin{array}{r} 80 + 14 \\ = 94 \end{array}$$

3. $72 + 19$

TENS

$$\begin{array}{r} 70 + 10 \\ = 80 \end{array}$$

ONES

$$\begin{array}{r} 2 + 9 \\ = 11 \end{array}$$

TOTAL

$$\begin{array}{r} 80 + 11 \\ = 91 \end{array}$$

4. $64 + 28$

TENS

$$\begin{array}{r} 60 + 20 \\ = 80 \end{array}$$

ONES

$$\begin{array}{r} 4 + 8 \\ = 12 \end{array}$$

TOTAL

$$\begin{array}{r} 80 + 12 \\ = 92 \end{array}$$

5. $37 + 55$

TENS

$$\begin{array}{r} 30 + 50 \\ = 80 \end{array}$$

ONES

$$\begin{array}{r} 7 + 5 \\ = 12 \end{array}$$

TOTAL

$$\begin{array}{r} 80 + 12 \\ = 92 \end{array}$$

6. $83 + 18$

TENS

$$\begin{array}{r} 80 + 10 \\ = 90 \end{array}$$

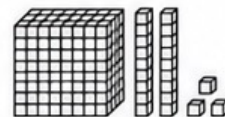
ONES

$$\begin{array}{r} 3 + 8 \\ = 11 \end{array}$$

TOTAL

$$\begin{array}{r} 90 + 11 \\ = 101 \end{array}$$

SPLIT STRATEGY PRACTICE • 3-DIGIT ADDITION



Name: _____

Date: _____

Partition each addend into hundreds, tens and ones. Add the parts, then combine the partial sums.

1. $243 + 156$

HUNDREDS

TENS

ONES

TOTAL

2. $327 + 245$

HUNDREDS

TENS

ONES

TOTAL

3. $418 + 267$

HUNDREDS

TENS

ONES

TOTAL

4. $356 + 438$

HUNDREDS

TENS

ONES

TOTAL

5. $509 + 184$

HUNDREDS

TENS

ONES

TOTAL

6. $276 + 325$

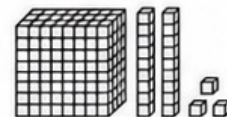
HUNDREDS

TENS

ONES

TOTAL

SPLIT STRATEGY PRACTICE • 3-DIGIT ADDITION



Name: ANSWERS

Date: _____

Partition each addend into hundreds, tens and ones. Add the parts, then combine the partial sums.

1. $243 + 156$

HUNDREDS

$$200 + 100 = 300$$

TENS

$$40 + 50 = 90$$

ONES

$$3 + 6 = 9$$

TOTAL

$$300 + 90 + 9 = 399$$

2. $327 + 245$

HUNDREDS

$$300 + 200 = 500$$

TENS

$$20 + 40 = 60$$

ONES

$$7 + 5 = 12$$

TOTAL

$$500 + 60 + 12 = 572$$

3. $418 + 267$

HUNDREDS

$$400 + 200 = 600$$

TENS

$$10 + 60 = 70$$

ONES

$$8 + 7 = 15$$

TOTAL

$$600 + 70 + 15 = 685$$

4. $356 + 438$

HUNDREDS

$$300 + 400 = 700$$

TENS

$$50 + 30 = 80$$

ONES

$$6 + 8 = 14$$

TOTAL

$$700 + 80 + 14 = 794$$

5. $509 + 184$

HUNDREDS

$$500 + 100 = 600$$

TENS

$$0 + 80 = 80$$

ONES

$$9 + 4 = 13$$

TOTAL

$$600 + 80 + 13 = 693$$

6. $276 + 325$

HUNDREDS

$$200 + 300 = 500$$

TENS

$$70 + 20 = 90$$

ONES

$$6 + 5 = 11$$

TOTAL

$$500 + 90 + 11 = 601$$

JUMP STRATEGY PRACTICE • 2-DIGIT ADDITION



Name: _____

Date: _____

Start with the larger addend. Partition the other addend, then show tens and ones jumps on the open number line.

1. $54 + 28$

START TOTAL

2. $67 + 35$

START TOTAL

3. $43 + 39$

START TOTAL

4. $86 + 17$

START TOTAL

5. $58 + 2$

START TOTAL

6. $75 + 26$

START TOTAL

JUMP STRATEGY PRACTICE • 2-DIGIT ADDITION

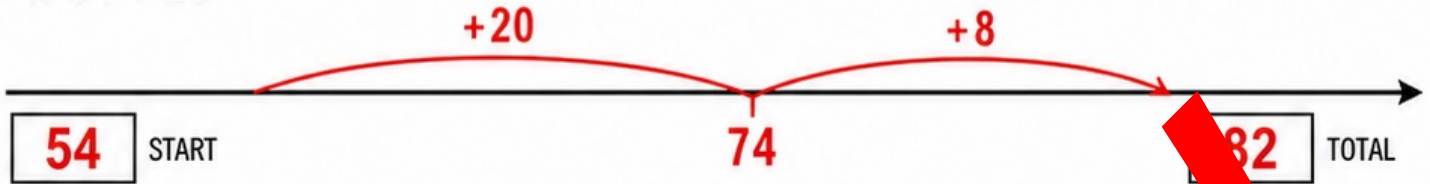


Name: **ANSWERS**

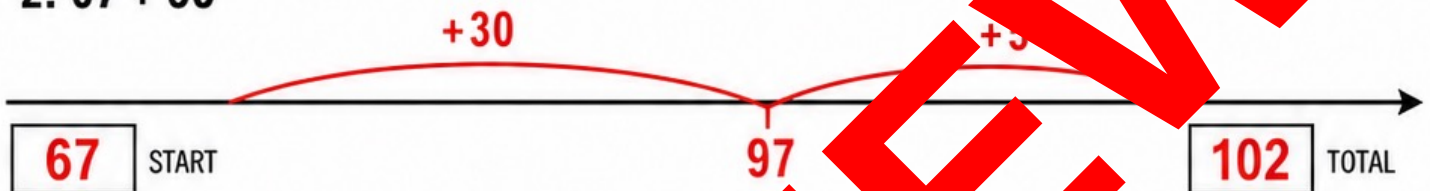
Date: _____

Start with the larger addend. Partition the other addend, then show tens and ones jumps on the open number line.

1. $54 + 28$



2. $67 + 35$



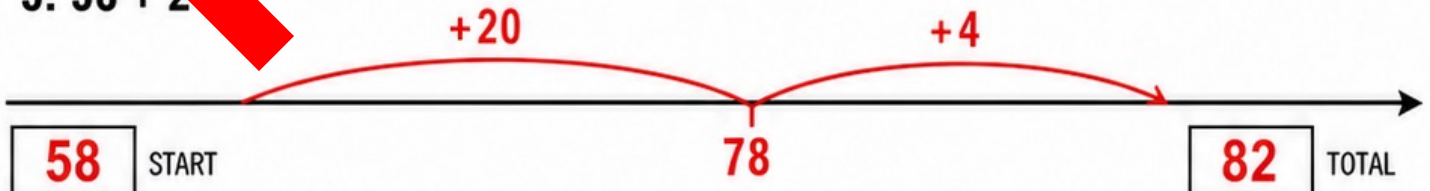
3. $43 + 39$



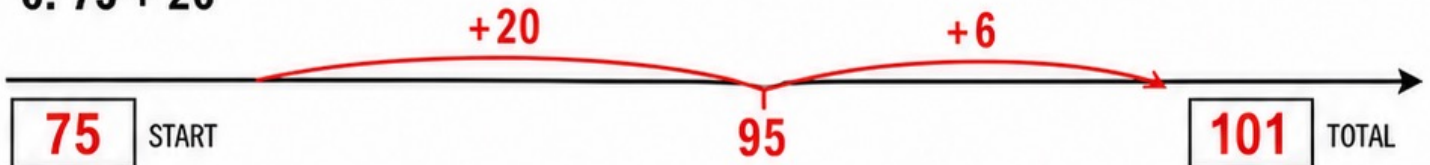
4. $86 + 17$



5. $58 + 24$



6. $75 + 26$



JUMP STRATEGY PRACTICE • 3-DIGIT ADDITION



Name: _____

Date: _____

Start with the larger addend. Partition the other addend into hundreds, tens and ones, then show the jumps.

1. $236 + 147$

START



TOTAL

2. $358 + 226$

START



TOTAL

3. $475 + 139$

START



TOTAL

4. $287 + 315$

START



TOTAL

5. $541 + 168$

START



TOTAL

6. $626 + 278$

START



TOTAL

JUMP STRATEGY PRACTICE • 3-DIGIT ADDITION

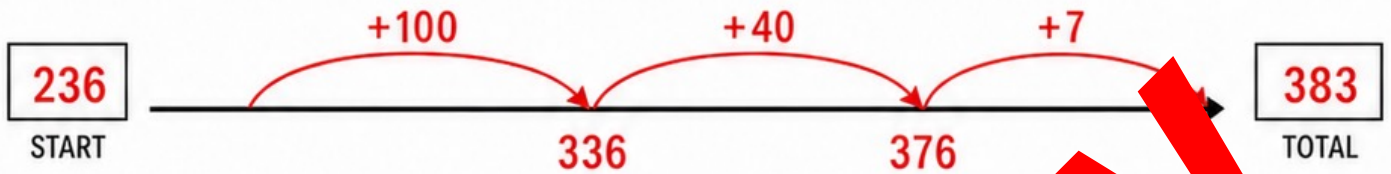


Name: **ANSWERS**

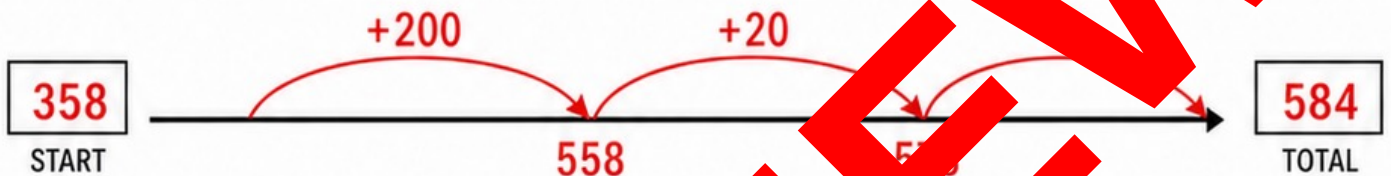
Date: _____

Start with the larger addend. Partition the other addend into hundreds, tens and ones, then show the jumps.

1. $236 + 147$



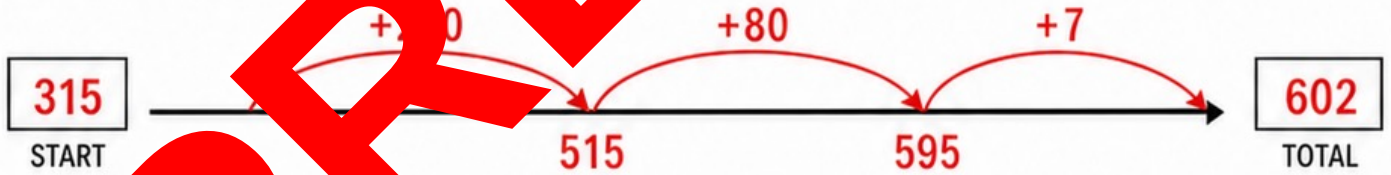
2. $358 + 226$



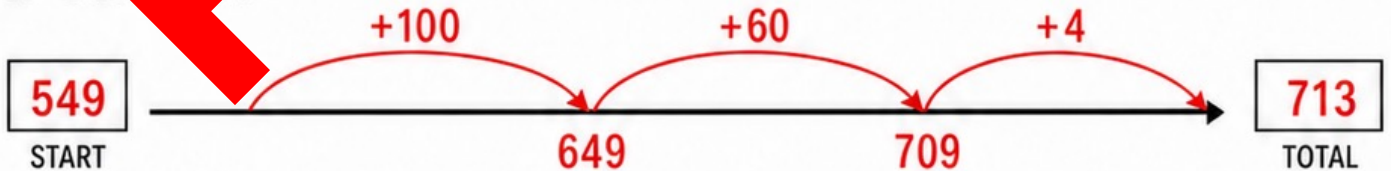
3. $475 + 139$



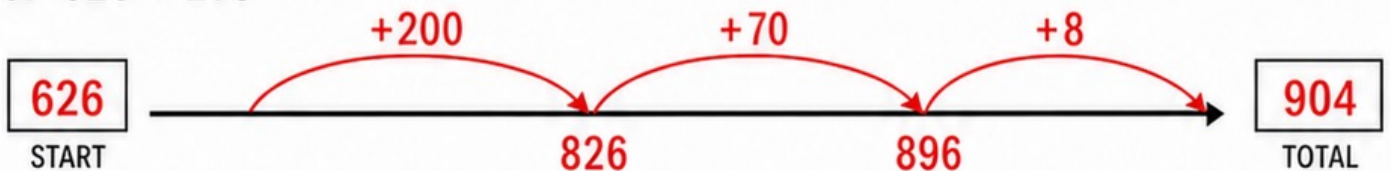
4. $287 + 315$



5. $549 + 164$



6. $626 + 278$



COMPENSATION WITH FRIENDLY NUMBERS



Name: _____

Date: _____

Adjust one addend to a friendly number. Add, then compensate for the adjustment.

1. $49 + 36$

ADJUST



FRIENDLY SUM



COMPENSATE & TOTAL

2. $68 + 27$

ADJUST



FRIENDLY SUM



COMPENSATE & TOTAL

3. $198 + 45$

ADJUST



FRIENDLY SUM



COMPENSATE & TOTAL

4. $297 + 186$

ADJUST



FRIENDLY SUM



COMPENSATE & TOTAL

5. $395 + 248$

ADJUST



FRIENDLY SUM



COMPENSATE & TOTAL

6. $598 + 227$

ADJUST



FRIENDLY SUM



COMPENSATE & TOTAL

COMPENSATION WITH FRIENDLY NUMBERS



Name: _____

Date: _____

Adjust one addend to a friendly number. Add, then compensate for the adjustment.

1. $49 + 36$

ADJUST

$$49 + 1 = 50$$



FRIENDLY SUM

$$50 + 36 = 86$$



COMPENSATE & TOTAL

$$86 - 1 = 85$$

2. $68 + 27$

ADJUST

$$68 + 2 = 70$$



FRIENDLY SUM

$$70 + 27 = 97$$



COMPENSATE & TOTAL

$$97 - 2 = 95$$

3. $198 + 45$

ADJUST

$$198 + 2 = 200$$



FRIENDLY SUM

$$200 + 45 = 245$$



COMPENSATE & TOTAL

$$245 - 2 = 243$$

4. $297 + 186$

ADJUST

$$297 + 3 = 300$$



FRIENDLY SUM

$$300 + 186 = 486$$



COMPENSATE & TOTAL

$$486 - 3 = 483$$

5. $399 + 248$

ADJUST

$$399 + 1 = 400$$



FRIENDLY SUM

$$400 + 248 = 648$$



COMPENSATE & TOTAL

$$648 - 1 = 647$$

6. $598 + 227$

ADJUST

$$598 + 2 = 600$$



FRIENDLY SUM

$$600 + 227 = 827$$



COMPENSATE & TOTAL

$$827 - 2 = 825$$

WRITTEN ALGORITHM • 2-DIGIT REGROUPING

T	O

Name: _____ Date: _____

Line up the tens and ones. Add the ones first, regroup if needed, then add the tens.

1. $47 + 38$

T	O
4	7
+	3 8

2. $56 + 67$

T	O
5	6
+	6 7

3. $68 + 59$

T	O
6	8
+	5 9

4. $74 + 48$

T	O
7	4
+	4 8

5. $39 + 86$

T	O
3	9
+	8 6

6. $65 + 57$

T	O
6	5
+	5 7

WRITTEN ALGORITHM • 2-DIGIT REGROUPING

T	O

Name: ANSWERS Date: _____

Line up the tens and ones. Add the ones first, regroup if needed, then add the tens.

1. $47 + 38$

	1	
T		O
4		7
+	3	8
	8	5

2. $56 + 67$

	1	
T		O
5		6
+	6	7
	1	2
	2	3

3. $68 + 59$

	1	
T		O
6		8
+	5	9
	1	2
	2	7

4. $74 + 48$

	1	
T		O
7		4
+	4	8
	1	2
	2	2

5. $39 + 86$

	1	
T		O
3		9
+	8	6
	1	2
	2	5

6. $65 + 57$

	1	
T		O
6		5
+	5	7
	1	2
	2	2

WRITTEN ALGORITHM • 3-DIGIT REGROUPING

H	T	O

Name: _____

Date: _____

Line up the hundreds, tens and ones. Regroup carefully, then check whether the answer is reasonable.

1. $286 + 347$

	H	T	O
	2	8	6
+	3	4	7

2. $458 + 176$

	H	T	O
	4	5	8
+	1	7	6

3. $569 + 284$

	H	T	O
	5	6	9
+	2	8	4

4. $397 + 458$

	H	T	O
	3	9	7
+	4	5	8

5. $625 + 297$

	H	T	O
	6	2	5
+	2	9	7

6. $748 + 185$

	H	T	O
	7	4	8
+	1	8	5

WRITTEN ALGORITHM • 3-DIGIT REGROUPING

H	T	O

Name: _____ **ANSWERS**

Date: _____

Line up the hundreds, tens and ones. Regroup carefully, then check whether the answer is reasonable.

1. $286 + 347$

	1	1	
	H	T	O
	2	8	6
+	3	4	7
	6	3	3

2. $458 + 176$

	1	1	
	H	T	O
	4	5	8
+	1	7	6
	6	3	4

3. $569 + 284$

	1	1	
	H	T	O
	5	6	9
+	2	8	4
	8	5	3

4. $397 + 458$

	1	1	
	H	T	O
	3	9	7
+	4	5	8
	8	5	5

5. $625 + 297$

	1		
	H	T	O
	6	2	5
+	2	9	7
	9	2	2

6. $748 + 185$

	1	1	
	H	T	O
	7	4	8
+	1	8	5
	9	3	3

CHOOSE AND EXPLAIN A STRATEGY



Name: _____

Date: _____

Choose an efficient strategy, solve the equation and explain why your choice suited the numbers.

1. $48 + 37$ ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☐ ALGORITHM	WORKING	Why was this efficient? _____ _____
2. $59 + 26$ ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☐ ALGORITHM	WORKING	Why was this efficient? _____ _____
3. $198 + 237$ ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☐ ALGORITHM	WORKING	Why was this efficient? _____ _____
4. $346 + 278$ ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☐ ALGORITHM	WORKING	Why was this efficient? _____ _____
5. $497 + 236$ ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☐ ALGORITHM	WORKING	Why was this efficient? _____ _____
6. $289 + 355$ ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☐ ALGORITHM	WORKING	Why was this efficient? _____ _____

CHOOSE AND EXPLAIN A STRATEGY



Name: ANSWERS

Date: _____

Choose an efficient strategy, solve the equation and explain why your choice suited the numbers.

1. 48 + 37 ☒ SPLIT ☐ JUMP ☐ COMPENSATE ☐ ALGORITHM	WORKING $40 + 30 = 70; 8 + 7 = 15;$ $70 + 15 = 85$	Why was this efficient? The place-value parts were easy to combine. _____ _____
2. 59 + 26 ☐ SPLIT ☐ JUMP ☒ COMPENSATE ☐ ALGORITHM	WORKING $60 + 26 - 1 = 85$	Why was this efficient? 59 is 1 away from the friendly number 60. _____ _____
3. 198 + 237 ☐ SPLIT ☐ JUMP ☒ COMPENSATE ☐ ALGORITHM	WORKING $200 + 237 - 2 = 435$	Why was this efficient? 198 is close to 200. _____ _____
4. 346 + 278 ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☒ ALGORITHM	WORKING $346 + 278 = 624$	Why was this efficient? The aligned columns kept two regroupings clear. _____ _____
5. 497 + 186 ☐ SPLIT ☐ JUMP ☒ COMPENSATE ☐ ALGORITHM	WORKING $500 + 186 - 3 = 683$	Why was this efficient? 497 is close to 500. _____ _____
6. 289 + 355 ☐ SPLIT ☐ JUMP ☐ COMPENSATE ☒ ALGORITHM	WORKING $289 + 355 = 644$	Why was this efficient? The place-value columns supported accurate regrouping. _____ _____

ADDITION STRATEGIES ASSESSMENT • PAGE 1



Name: _____

Date: _____

A. IDENTIFY THE STRATEGY • 1 MARK

$$49 + 36 \rightarrow 50 + 36 - 1$$

Name the strategy:

_____/1

B. SHOW A MENTAL STRATEGY • 6 MARKS

1. Use the split strategy to solve $68 + 27$.

TENS	ONES	TOTAL

/3

2. Use the jump strategy to solve $236 + 47$.

START	TOTAL

/3

C. USE THE WRITTEN ALGORITHM • 3 MARKS

Solve $286 + 347$. Show both regroupings.

	H	T	O
	2	8	6
+	3	4	7

/3

TOTAL: /10

ADDITION STRATEGIES ASSESSMENT • PAGE 1



Name: _____

ANSWERS

Date: _____

A. IDENTIFY THE STRATEGY • 1 MARK

$$49 + 36 \rightarrow 50 + 36 - 1$$

Name the strategy:

COMPENSATION

/1

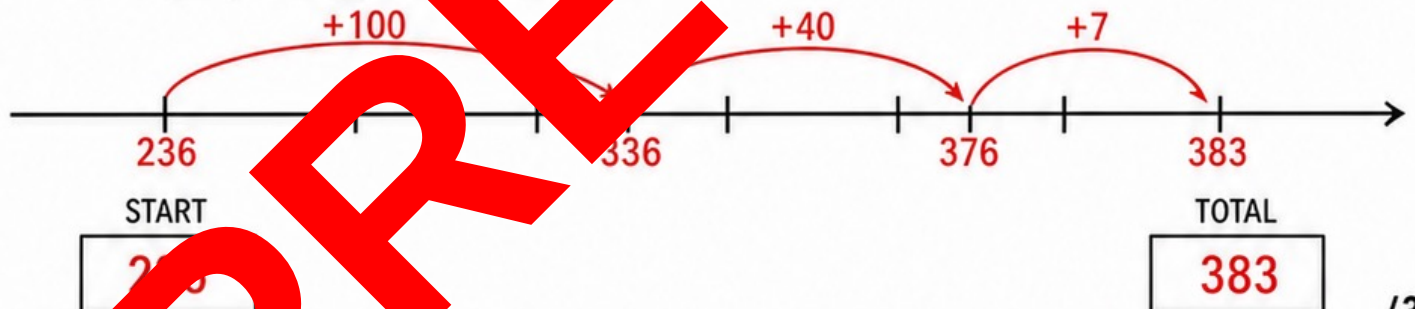
B. SHOW A MENTAL STRATEGY • 6 MARKS

1. Use the split strategy to solve $68 + 27$.

TENS	ONES	TOTAL
$60 + 20 = 80$	$8 + 7 = 15$	$80 + 15 = 95$

/3

2. Use the jump strategy to solve $236 + 147$.



/3

C. USE THE WRITTEN ALGORITHM • 3 MARKS

Solve $286 + 347$. Show both regroupings.

	1	1	
	H	T	O
	2	8	6
+	3	4	7
	6	3	3

/3

TOTAL: /10



Name: _____

Date: _____

D. CHOOSE AND EXPLAIN • 4 MARKS

Choose an efficient strategy for $198 + 237$. Show your working and explain why the strategy suited the numbers.

☐

SPLIT

☐

JUMP

☐

COMPENSATE

☐

ALGORITHM

WORKING

E. SOLVE A PROBLEM • 3 MARKS

The school library had 368 fiction books and received 5 more. How many fiction books are there now?

SHOW A STRATEGY

Sentence _____

F. ANALYSE ERROR • 3 MARKS

Liam says $367 + 198 = 515$. Correct the calculation and explain one regrouping error.

	☐	☐	
	H	T	O
	3	6	7
+	2	5	8

TOTAL: /10



Name: ANSWERS

Date: _____

D. CHOOSE AND EXPLAIN • 4 MARKS

Choose an efficient strategy for $198 + 237$. Show your working and explain why the strategy suited the numbers.

☐

SPLIT

☐

JUMP

☒

COMPENSATE

☐

ALGORITHM

WORKING

$$200 + 237 - 2 = 435$$

198 is close to 200, so one small adjustment makes the addition efficient.

/4

E. SOLVE A PROBLEM • 3 MARKS

The school library had 368 fiction books. It received 245 more. How many fiction books are there now?

SHOW A STRATEGY

$$300 + 200 = 500$$

$$60 + 40 = 100$$

$$8 + 5 = 13$$

$$500 + 100 + 13 = 613$$

Sentence answer: There are 613 fiction books now.

/3

F. ANALYSIS OF ERROR • 3 MARKS

Liam says $367 + 245 = 515$. Correct the calculation and explain one regrouping error.

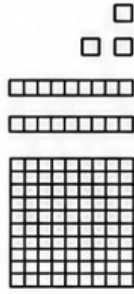
	1	1	
	H	T	O
	3	6	7
+	2	5	8
	6	2	5

$7 + 8 = 15$, so regroup 1 ten.

Then $6 + 5 + 1 = 12$ tens, and the hundreds total is 6. Liam ignored the regrouped ones.

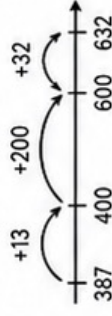
/3

TOTAL: /10



ADDITION STRATEGIES RUBRIC

$$\begin{array}{r} 387 \\ + 245 \\ \hline \end{array}$$



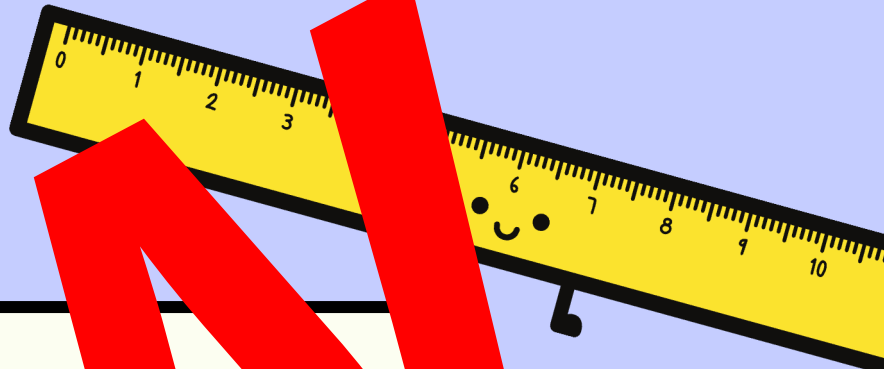
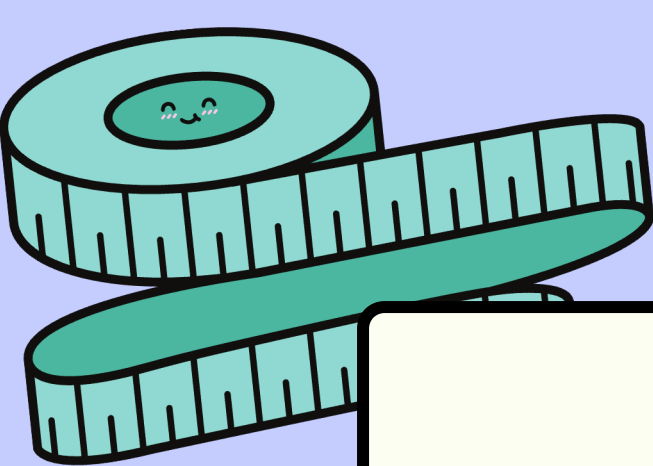
Student: _____

Date: _____

Teacher: _____

CRITERIA	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
Place-value understanding	Needs support to identify place values.	Needs some support to identify place values.	Partitions 2- and 3-digit numbers accurately.	Uses place value flexibly in calculations.	Explains and connects place-value representations.
Efficient mental strategies	Needs support to use a strategy.	Uses a strategy with prompt.	Uses split, jump or compensation correctly.	Selects an efficient mental strategy.	Compares strategies and justifies the most efficient.
Written algorithm and regrouping	Needs support to align addends.	Aligns addends but regrouping is inconsistent.	Uses the algorithm and groups accurately.	Solves multi-step regrouping accurately.	Explains regrouping and checks the method.
Strategy choice and explanation	Names a strategy with support.	Names a strategy and gives a brief reason.	Chooses a suitable strategy and explains it.	Justifies choices using number features.	Evaluates several valid strategies.
Accuracy and checking	Answers are often incomplete.	Some answers are accurate.	Calculations are mostly accurate and checked.	Calculations are accurate and checked.	Detects errors and explains corrections.

Overall judgement: _____



Additional Strategies

PREVIEW

Learning Goal

We are learning to choose and use efficient addition strategies.

Success looks like:

- I can split numbers by place value.
- I can jump in friendly jumps.
- I can compare to make an easier number.
- I can use a written algorithm to check my answer.



Your Strategy Toolkit

Split Strategy – add hundreds, tens and ones separately.

Jump Strategy – start with the larger number and add in jumps.

Compensation – adjust to a friendly number, then compensate.

Written Algorithm – line up place values and borrow when needed.

A good mathematician chooses a strategy that suits the numbers.



How Do I Choose?

Look closely at the numbers before you begin.

- Friendly place values? Try split strategy.
- Easy jumps by hundreds, tens and ones? Try jump strategy.
- Close to a multiple of 10 or 100? Try compensation.
- Several digits? Try a written algorithm.

Estimate first so you know what a possible answer looks like.



Split Strategy

Partition each addend into place-value parts.

Add matching places, then combine the partial sums.

$$47 + 36$$

$$= (40 + 7) + (30 + 6)$$

$$= 40 + 7 + 30 + 6$$

Using place value as visual makes the calculation easier to explain.



Split $47 + 36$

Tens: $40 + 30 = 70$

Ones: $7 + 6 = 13$

Combine: $70 + 13 = 83$

$47 + 36 = 83$

Check: 47 is close to 50 and 36 is close to 40.

$50 + 40 = 90$, so 83 is reasonable.



Split $286 + 357$

Hundreds: $200 + 300 = 500$

Tens: $80 + 50 = 130$

Ones: $6 + 7 = 13$

Combine: $500 + 130 + 13 = 643$

$286 + 357 = 643$

Parts of a sum may be combined in any efficient order.



Try the Split Strategy

Solve each calculation by splitting both addends.

1. $68 + 25$

2. $314 + 279$

Show the hundreds, tens and ones you add.

Then combine your partial sums.

Answers and



Jump Strategy

Start with the larger number.

Add the other number in helpful jumps.

$$58 + 27$$

Start at 58

Jump 10, then 7.

When you get to the end of a number line, split again to bridge through a friendly ten or hundred.



Jump $58 + 27$

Start at 58.

$$58 + 20 = 78$$

$$78 + 7 = 85$$

$$58 + 27 =$$

Alternative bridge: $58 + 2 = 60$, then $+25 = 85$.



Jump $346 + 278$

Start at 346.

$$346 + 200 = 546$$

$$546 + 70 = 616$$

$$616 + 8 = 624$$

$$346 + 278 = 624$$

So each jump is used to keep track of the running total.



Try the Jump Strategy

Use an open number line or record each running total.

1. $75 + 26$

2. $475 + 139$

Choose how many jumps to make and label every step.

Answers: 101 and 614



Compensation

Change one addend to a friendly number.

Complete the easier calculation.

Then undo the change.

If you add 1 to an addend, subtract 1 from the total.

If you subtract 2 from an addend, add 2 to the total.

The adjustments must stay balanced.



Compensate $49 + 36$

49 is close to 50.

$$49 + 36$$

$$= 50 + 36 - 1$$

$$= 86 - 1$$

$$= 85$$

$$49 + 36$$

We added 1 to make 50, so we subtracted 1 at the end.



Compensate 297 + 186

297 is close to 300.

$$297 + 186$$

$$= 300 + 186 - 3$$

$$= 486 - 3$$

$$= 483$$

$$186 + 300 - 3$$

The nearest hundred makes the mental calculation efficient.



Try Compensation

Choose the addend that is close to a round number.

1. $68 + 27$

2. $399 + 248$

Record the estimate and undo it correctly.

Answers: 95 and 647



Written Algorithm

Write one addend under the other.

Align hundreds, tens and ones in straight column.

1. Add the ones.
 2. Regroup 10 ones as 1 ten when needed.
 3. Add the tens including the regrouped ten.
 4. Add the hundreds including any regrouped hundred.
- Any tens that remain stays in its place-value column.



Algorithm: $67 + 58$

Ones: $7 + 8 = 15$

Write 5 ones and regroup 1 ten.

Tens: $6 + 5 + 1 = 12$ tens

Write 2 tens and regroup 1 hundred.

$67 + 58 = 125$

Estimate: $70 + 60 = 130$, so 125 is reasonable.



Algorithm: $286 + 347$

Ones: $6 + 7 = 13$ — write 3, regroup 1 ten.

Tens: $8 + 4 + 1 = 13$ — write 3, regroup 1 hundred.

Hundreds: $2 + 3 + 1 = 6$

$$286 + 347 = 633$$

Estimate: $300 + 300 \approx 600$ so 633 is sensible.



Watch for These Errors

Misaligned digits — line up ones, tens and hundreds.

Forgotten regrouping — record the regrouped digit above its column.

Double regrouping — add the carried digit only once.

Wrong adjustment — do compensation with the opposite operation.

Unreasonable answer — estimate and recalculate.

Clear writing helps you spot correct mistakes.



Compare Two Strategies

Solve $198 + 237$.

Compensation:

$$200 + 237 - 2 = 435$$

Split strategy:

$$(100 + 200 + 90 + 10) + (90 + 10 + 37)$$

$$= 300 + 100 + 15 + 35$$

Both are correct. Compensation is especially efficient here.



Estimate and Check

Before solving $368 + 245$:

Round to friendly numbers: $370 + 250 = 620$.

Exact answer: $368 + 245 = 613$.

After solving, ask:

- Is 613 close to my estimate?
- Did I round each number the same way?
- Did I use a different strategy?

Yes, 613 is reasonable.



Addition in a Word Problem

A school collected 368 cans on Monday and 245 cans on Tuesday.

How many cans were collected altogether?

Equation: $368 + 245$

Strategy: written algorithm or jump strategy

Calculation: $368 + 245 = 613$

Answer: The school collected 613 cans altogether.

Always include the units in your final sentence.



Explain Your Thinking

A clear mathematical explanation includes:

1. The strategy you chose.
2. The steps you followed
3. Your exact answer.
4. A check to see if you are right.
5. Why your strategy suited the problem.

Sentence starter:

"I chose _____ because _____. First I _____. My answer is _____."



Addition Strategy Review

Split — partition by place value and recompose.

Jump — add in helpful steps from a larger number.

Compensate — adjust to a friendly number, then undo the change.

Written algorithm — column place and regroup accurately.

Estimate — more or less to check.

Check — check your calculation.

Explain — explain why your strategy is efficient.





Well Done!

Additional Strategies Quiz



Question 1

Use split strategy to solve $46 + 37$.

A. 73

B. 83

C. 93

D. 103



Answer 1

B. 83

Tens: $40 + 30 = 70$

Ones: $6 + 7 = 13$

Combine: $70 + 13 = 83$



Question 2

Use split strategy to solve $234 + 158$.

Show your hundreds, tens and ones.

Write the exact total.



Answer 2

392

Hundreds: $200 + 100 = 300$

Tens: $30 + 50 = 80$

Ones: $4 + 8$

$300 + 80 + 12 = 392$



Question 3

True or false?

When using jump strategy starting with the larger addend is usually more efficient.



Answer 3

True

Starting with the larger addend usually means fewer jumps. The total stays the same because addition can be completed in either order.



Question 4

Use compensation to solve $59 + 26$.

A. 75

B. 84

C. 85

D. 95



Answer 4

C. 85

Make 59 into 60:

$$60 + 26 = 86$$

Then undo extra

$$86 - 1 = 85$$



Question 5

Use jump strategy to solve $347 + 186$

Record the running total after each jump.

PREVIEW



Answer 5

533

$$347 + 100 = 447$$

$$447 + 80 = 527$$

$$527 + 6 = 533$$



Question 6

Use the written algorithm to solve $271 + 14$

A. 313

B. 413

C. 423

D. 433



Answer 6

C. 423

Ones: $8 + 5 = 13$

Tens: $7 + 4 + 1 = 12$

Hundreds: $1 + 1 = 2$

Total: 423



Question 7

True or false?

$498 + 263$ can be solved as

$500 + 263 - 2$.

The answer is 1.



Answer 7

True

$$500 + 263 = 763$$

$$763 - 2 = 761$$

The extra 2 added to 500 is removed at the end.



Question 8

Choose an efficient strategy and solve 196×327 .
Name your strategy and show the adjustments or steps.



Answer 8

523

One efficient method is compensation.

$$200 + 327 - 4$$

$$= 527 - 4$$

$$= 523$$



Question 9

A library has 278 fiction books and 336 informational books.
How many books are there altogether?

A. 514

B. 614

C. 624

D. 614



Answer q

C. 624 books

$$278 + 346 = 624$$

Estimate: $280 + 350 = 630$, so 624 is reasonable.



Question 10

A student solved $367 + 258$ and wrote 15.

Find the correct total and explain one likely grouping error.



Answer 10

625

Ones: $7 + 8 = 15$ — regroup 1 to

Tens: $6 + 5 + 1 = 12$ — regroup 1 hundred

Hundreds: $1 + 1 = 2$

A likely error was forgetting to regrouped digit.





Well Done!

PREVIEW