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Mental Addition Strategies - Year 2

Table of Contents	
Presentation: Mental Addition Strategies	
Display: Mental Addition Strategy Toolbox	
Game: Make Ten Match	
Game: Strategy Sprint	
Worksheet: Turnarounds and Near Doubles	
Worksheet: Make Ten and Bridge Strategies	
Worksheet: Looking for Tens	
Worksheet: Add Ten and Extended Facts	
Worksheet: Split Strategy	
Worksheet: Jump Strategy	
Quiz: Mental Addition Strategies	
Assessment: Mental Addition Strategy Mission	
Rubric: Mental Addition Strategies Rubric	





Mental Addition Strategy Toolbox

1

Turnarounds

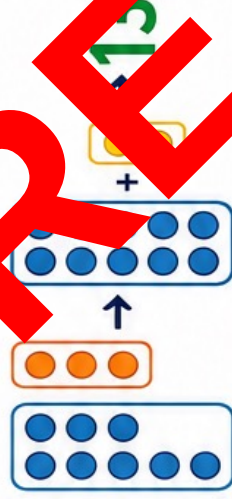
$$4 + 7 = 7 + 4 = 11$$



2

Make Ten

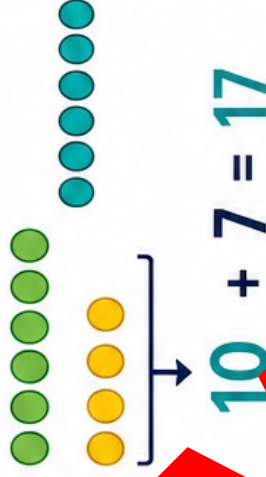
$$8 + 5 \rightarrow 8 + 2 + 3 \rightarrow 13$$



3

Look for Tens

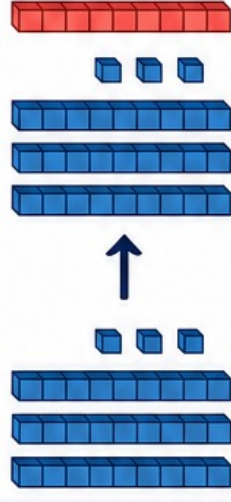
$$6 + 4 + 7 \rightarrow 10 + 7 = 17$$



4

Add Ten

$$36 + 10 = 46$$

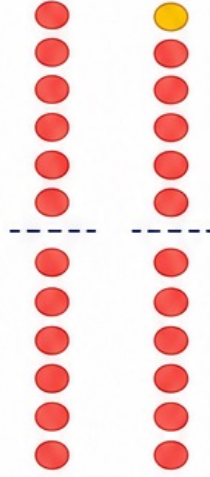


5

Doubles / Near Doubles

$$7 + 7 = 14$$

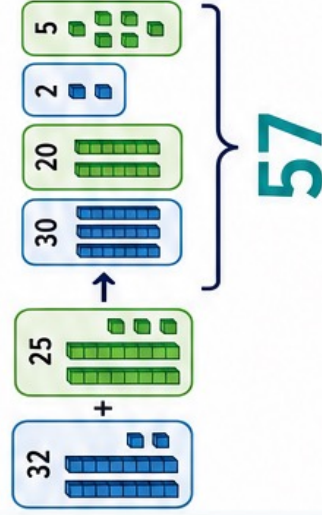
$$7 + 8 = 15$$



6

Split

$$32 + 25 \rightarrow 30 + 20 + 2 + 5 = 57$$



8

Pick the Strategy

Choose a clear, efficient path.



Make Ten Match

Cut out the cards. Match blue cards to make 10 and orange cards to make 20.

make 10

make 20

1	9	2	8	3
7	4	6	5	5
11	9	12	8	13
7	14	6	15	5

Strategy Sprint

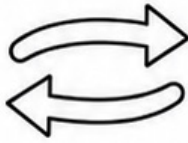
Roll, move, solve, then name the strategy you used.



Turnaround • Make Ten • Near Double • Add Ten • Split • Jump

Name: _____

Turnarounds and Near Doubles



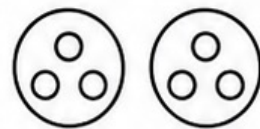
Part A: Turn it around

Write the turnaround fact, then solve.

1. $3 + 8 = \underline{\quad}$	Turnaround: $\underline{\quad} + \underline{\quad} = \underline{\quad}$
2. $5 + 9 = \underline{\quad}$	Turnaround: $\underline{\quad} + \underline{\quad} = \underline{\quad}$
3. $12 + 7 = \underline{\quad}$	Turnaround: $\underline{\quad} + \underline{\quad} = \underline{\quad}$
4. $6 + 14 = \underline{\quad}$	Turnaround: $\underline{\quad} + \underline{\quad} = \underline{\quad}$

Part B: Use a near double

Write the double you know, then add 1.

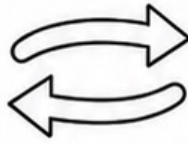


5. $6 + 7 = \underline{\quad}$	Double you know: 	Add 1: $= \underline{\quad}$
6. $8 + 9 = \underline{\quad}$	Double you know: 	Add 1: $= \underline{\quad}$
7. $4 + 5 = \underline{\quad}$	Double you know: 	Add 1: $= \underline{\quad}$
8. $9 + 10 = \underline{\quad}$	Double you know: 	Add 1: $= \underline{\quad}$

Which strategy felt fastest today? _____

Name: ANSWERS

Turnarounds and Near Doubles



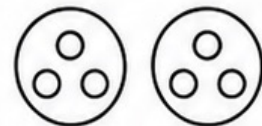
Part A: Turn it around

Write the turnaround fact, then solve.

1. $3 + 8 = \underline{11}$	Turnaround: $\underline{8} + \underline{3} = \underline{11}$
2. $5 + 9 = \underline{14}$	Turnaround: $\underline{9} + \underline{5} = \underline{14}$
3. $12 + 7 = \underline{19}$	Turnaround: $\underline{7} + \underline{12} = \underline{19}$
4. $6 + 14 = \underline{20}$	Turnaround: $\underline{14} + \underline{6} = \underline{20}$

Part B: Use a near double

Write the double you know, then add 1.



5. $6 + 7 = \underline{13}$	Double you know: $\underline{6 + 6 = 12}$	Add 1: $= \underline{13}$
6. $8 + 9 = \underline{17}$	Double you know: $\underline{8 + 8 = 16}$	Add 1: $= \underline{17}$
7. $4 + 5 = \underline{9}$	Double you know: $\underline{4 + 4 = 8}$	Add 1: $= \underline{9}$
8. $9 + 10 = \underline{19}$	Double you know: $\underline{9 + 9 = 18}$	Add 1: $= \underline{19}$

Which strategy felt fastest today? Near double

Name: _____

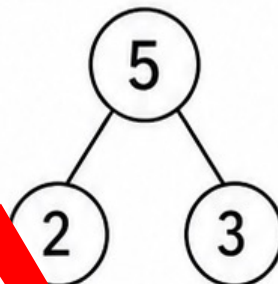
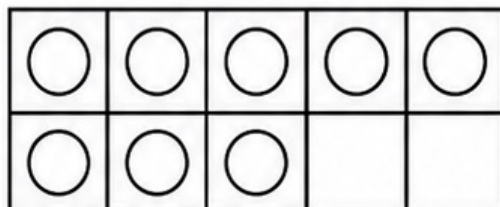
Make Ten: Build the Bridge

Split the second addend. Fill 10 first, then add what is left.

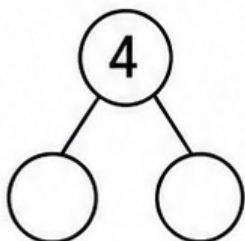
Example: $8 + 5$

$$8 + 2 + 3$$

$$10 + 3 = 13$$



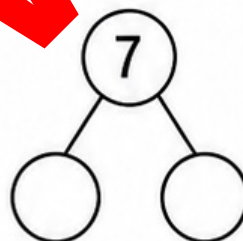
1. $9 + 4$



$$\underline{\quad} + \underline{\quad} + \underline{\quad}$$

$$10 + \underline{\quad} = \underline{\quad}$$

2. $8 + 7$



$$\underline{\quad} + \underline{\quad} + \underline{\quad}$$

$$10 + \underline{\quad} = \underline{\quad}$$

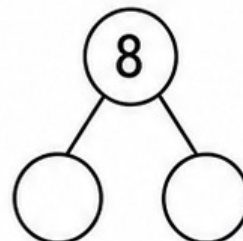
3. $6 + 7$



$$\underline{\quad} + \underline{\quad} + \underline{\quad}$$

$$10 + \underline{\quad} = \underline{\quad}$$

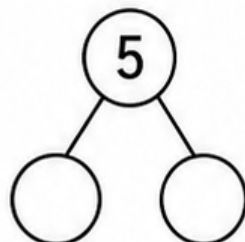
4. $9 + 8$



$$\underline{\quad} + \underline{\quad} + \underline{\quad}$$

$$10 + \underline{\quad} = \underline{\quad}$$

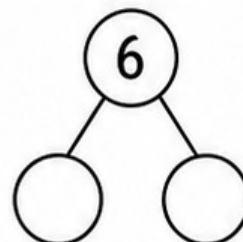
5. $7 + 5$



$$\underline{\quad} + \underline{\quad} + \underline{\quad}$$

$$10 + \underline{\quad} = \underline{\quad}$$

6. $8 + 6$



$$\underline{\quad} + \underline{\quad} + \underline{\quad}$$

$$10 + \underline{\quad} = \underline{\quad}$$

Name: ANSWERS

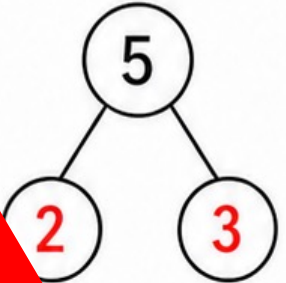
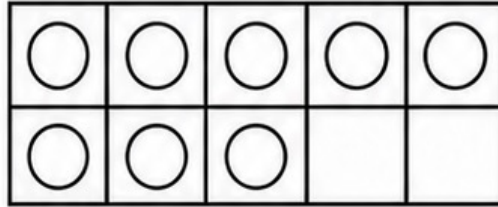
Make Ten: Build the Bridge

Split the second addend. Fill 10 first, then add what is left.

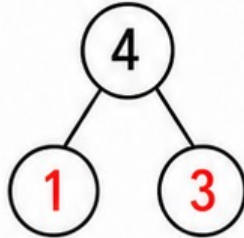
Example: $8 + 5$

$$8 + \underline{2} + \underline{3}$$

$$10 + \underline{3} = \underline{13}$$



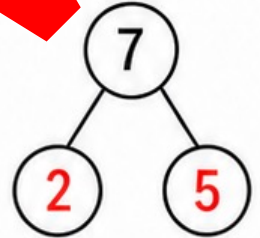
1. $9 + 4$



$$\underline{9} + \underline{1} + \underline{3}$$

$$10 + \underline{3} = \underline{13}$$

2. $8 + 7$



$$\underline{8} + \underline{2} + \underline{5}$$

$$10 + \underline{5} = \underline{15}$$

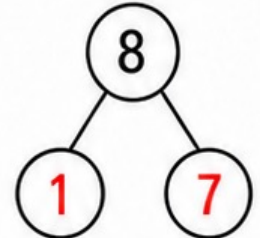
3. $6 + 7$



$$\underline{6} + \underline{4} + \underline{3}$$

$$10 + \underline{3} = \underline{13}$$

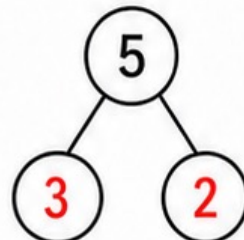
4. $9 + 8$



$$\underline{9} + \underline{1} + \underline{7}$$

$$10 + \underline{7} = \underline{17}$$

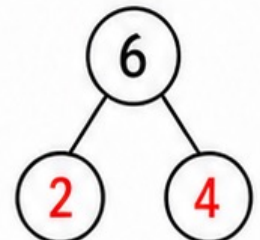
5. $7 + 5$



$$\underline{7} + \underline{3} + \underline{2}$$

$$10 + \underline{2} = \underline{12}$$

6. $8 + 6$



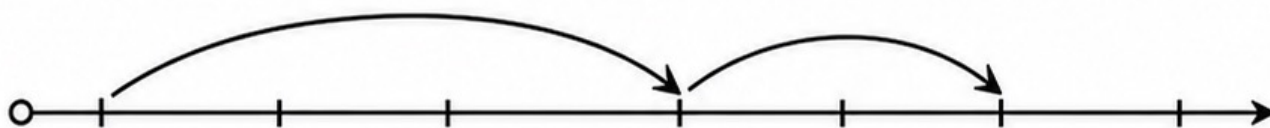
$$\underline{8} + \underline{2} + \underline{4}$$

$$10 + \underline{4} = \underline{14}$$

Name: _____

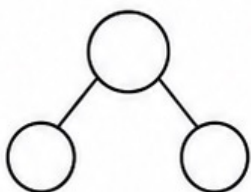
Make Ten: Bridge to the Next Ten

Jump to the next ten, then add the remainder.



1. $18 + 5$

Next ten: _____



_____ + _____ = _____

Total: _____

2. $27 + 6$

Next ten: _____

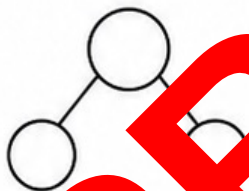


_____ + _____ = _____

Total: _____

3. $39 + 4$

Next ten: _____

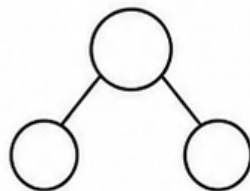


_____ + _____ = _____

Total: _____

4. $46 + 8$

Next ten: _____

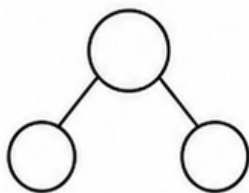


_____ + _____ = _____

Total: _____

5. $58 + 7$

Next ten: _____

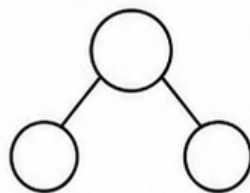


_____ + _____ = _____

Total: _____

6. $64 + 9$

Next ten: _____



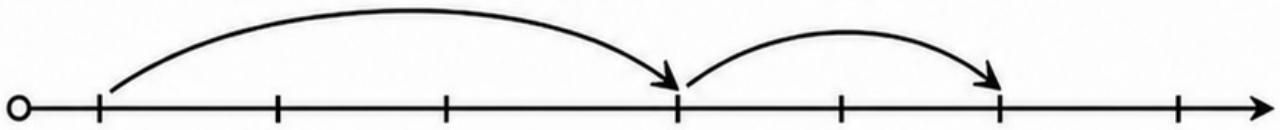
_____ + _____ = _____

Total: _____

Name: _____ **ANSWERS**

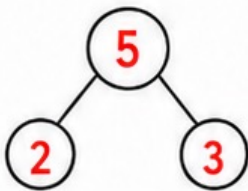
Make Ten: Bridge to the Next Ten

Jump to the next ten, then add the remainder.



1. $18 + 5$

Next ten: 20



$$\underline{20} + \underline{3} = \underline{23}$$

Total: 23

2. $27 + 6$

Next ten: 30



$$\underline{30} + \underline{3} = \underline{33}$$

Total: 33

3. $39 + 4$

Next ten: 40

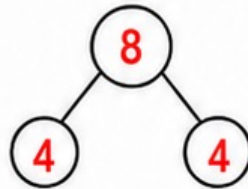


$$\underline{40} + \underline{3} = \underline{43}$$

Total: 43

4. $46 + 8$

Next ten: 50

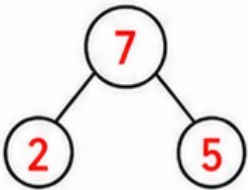


$$\underline{50} + \underline{4} = \underline{54}$$

Total: 54

5. $58 + 7$

Next ten: 60

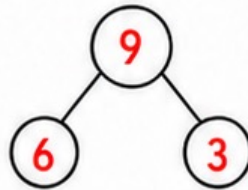


$$\underline{60} + \underline{5} = \underline{65}$$

Total: 65

6. $64 + 9$

Next ten: 70



$$\underline{70} + \underline{3} = \underline{73}$$

Total: 73

Name: _____

Looking for Tens



Circle the pair that makes the next ten. Rewrite and solve.

1.

$$14 + 6 + 7$$

Rewrite: _____

Total: _____

2.

$$23 + 7 + 5$$

Rewrite: _____

Total: _____

3.

$$18 + 2 + 9$$

Rewrite: _____

Total: _____

4.

$$35 + 5 + 4$$

Rewrite: _____

Total: _____

5.

$$42 + 8 + 6$$

Rewrite: _____

Total: _____

6.

$$56 + 4 + 9$$

Rewrite: _____

Total: _____

7.

$$61 + 9 + 8$$

Rewrite: _____

Total: _____

8.

$$74 + 6 + 7$$

Rewrite: _____

Total: _____

Name: _____

ANSWERS

Looking for Tens



Circle the pair that makes the next ten. Rewrite and solve.

1.

$$14 + 6 + 7$$

Rewrite: $20 + 7 = 27$

Total: 27

2.

$$23 + 7 + 5$$

Rewrite: $30 + 5 = 35$

Total: 35

3.

$$18 + 2 + 9$$

Rewrite: $20 + 9 = 29$

Total: 29

4.

$$35 + 5 + 4$$

Rewrite: $40 + 4 = 44$

Total: 44

5.

$$42 + 8 + 6$$

Rewrite: $50 + 6 = 56$

Total: 56

6.

$$56 + 4 + 9$$

Rewrite: $60 + 9 = 69$

Total: 69

7.

$$61 + 9 + 8$$

Rewrite: $70 + 8 = 78$

Total: 78

8.

$$74 + 6 + 7$$

Rewrite: $80 + 7 = 87$

Total: 87

Name: _____

Add Ten and Extended Facts

Part A: Add 10

Solve each fact.

+10
→

tens	ones

1. $24 + 10 = \underline{\quad}$

2. $37 + 10 = \underline{\quad}$

3. $58 + 10 = \underline{\quad}$

4. $67 + 10 = \underline{\quad}$

5. $75 + 10 = \underline{\quad}$

6. $82 + 10 = \underline{\quad}$

Part B: Find the missing number

7. $42 + \underline{\quad} = 52$

8. $\underline{\quad} + 10 = 76$

9. $89 + \underline{\quad} = 99$

10. $\underline{\quad} + 10 = 61$

Part C: Explain the pattern

When I add 10, the _____ digit changes by 1 and
the _____ digit stays the same.

How do you know? _____

Name: ANSWERS

Add Ten and Extended Facts

Part A: Add 10

Solve each fact.

+10
→

tens	ones

1. $24 + 10 = \underline{34}$

2. $37 + 10 = \underline{47}$

3. $58 + 10 = \underline{68}$

4. $67 + 10 = \underline{77}$

5. $75 + 10 = \underline{85}$

6. $82 + 10 = \underline{92}$

Part B: Find the missing number

7. $42 + \underline{10} = 52$

8. $\underline{66} + 10 = 76$

9. $89 + \underline{10} = 99$

10. $\underline{51} + 10 = 61$

Part C: Explain the pattern

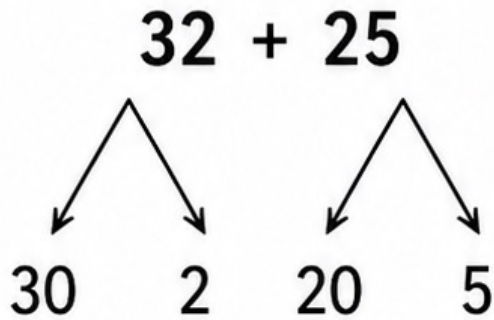
When I add 10, the tens digit changes by 1 and the ones digit stays the same.

How do you know? The tens increase by 1; the ones stay unchanged.

Name: _____

Split Strategy: Tens and Ones

Split both numbers into tens and ones. Add each part, then combine.



Tens: $30 + 20 = 50$

Ones: $2 + 5 = 7$

Combine: $50 + 7 = 57$

1. **41 + 27**

Tens: _____ + _____ = _____

Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

2. **34 + 22**

Tens: _____ + _____ = _____

Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

3. **53 + 16**

Tens: _____ + _____ = _____

Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

4. **62 + 25**

Tens: _____ + _____ = _____

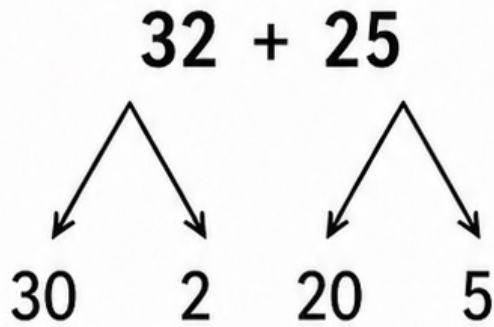
Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

Name: ANSWERS

Split Strategy: Tens and Ones

Split both numbers into tens and ones. Add each part, then combine.



Tens: $30 + 20 = 50$

Ones: $2 + 5 = 7$

Combine: $50 + 7 = 57$

1. 41 + 27

Tens: $40 + 20 = 60$

Ones: $1 + 7 = 8$

Combine: $60 + 8 = 68$

2. 34 + 22

Tens: $30 + 20 = 50$

Ones: $4 + 2 = 6$

Combine: $50 + 6 = 56$

3. 53 + 16

Tens: $50 + 10 = 60$

Ones: $3 + 6 = 9$

Combine: $60 + 9 = 69$

4. 62 + 25

Tens: $60 + 20 = 80$

Ones: $2 + 5 = 7$

Combine: $80 + 7 = 87$

Name: _____

Split Strategy: Regroup the Ones

Split into tens and ones. When the ones total is 10 or more, regroup it.

EXAMPLE

$$\begin{array}{r} 38 + 27 \\ \swarrow \quad \searrow \\ \text{tens} \quad \text{ones} \end{array}$$

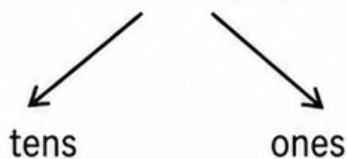
Tens: $30 + 20 = 50$

Ones: $8 + 7 = 15$

Combine: $50 + 15 = 65$

15 ones = 1 ten and 5 ones

1. $46 + 28$



Tens: _____ + _____ = _____

Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

2. $57 + 36$

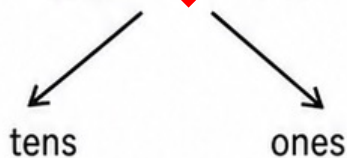


Tens: _____ + _____ = _____

Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

3. $29 + 48$



Tens: _____ + _____ = _____

Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

4. $35 + 47$



Tens: _____ + _____ = _____

Ones: _____ + _____ = _____

Combine: _____ + _____ = _____

Name: **ANSWERS**

Split Strategy: Regroup the Ones

Split into tens and ones. When the ones total is 10 or more, regroup it.

EXAMPLE

$$\begin{array}{r} 38 + 27 \\ \swarrow \quad \searrow \\ \text{tens} \quad \text{ones} \end{array}$$

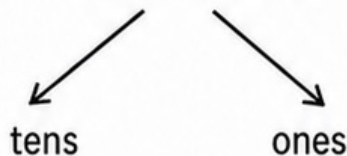
Tens: $30 + 20 = 50$

Ones: $8 + 7 = 15$

Combine: $50 + 15 = 65$

15 ones = 1 ten and 5 ones

1. $46 + 28$



Tens: $40 + 20 = 60$

Ones: $6 + 8 = 14$

Combine: $60 + 14 = 74$

2. $57 + 36$

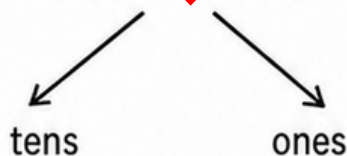


Tens: $50 + 30 = 80$

Ones: $7 + 6 = 13$

Combine: $80 + 13 = 93$

3. $29 + 48$

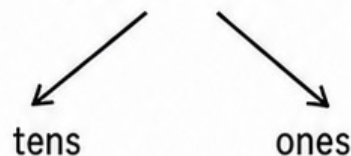


Tens: $20 + 40 = 60$

Ones: $9 + 8 = 17$

Combine: $60 + 17 = 77$

4. $35 + 47$



Tens: $30 + 40 = 70$

Ones: $5 + 7 = 12$

Combine: $70 + 12 = 82$

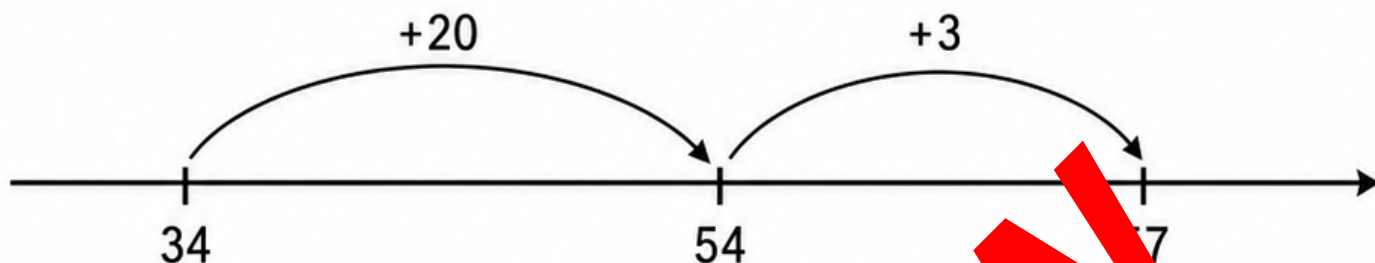
Name: _____

Jump Strategy: Tens Then Ones

Start at the first number. Jump the tens, then jump the ones.

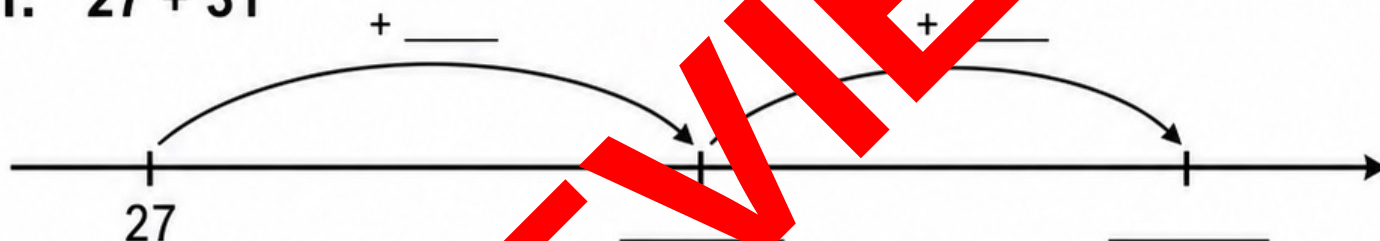
Example:

$$34 + 23$$



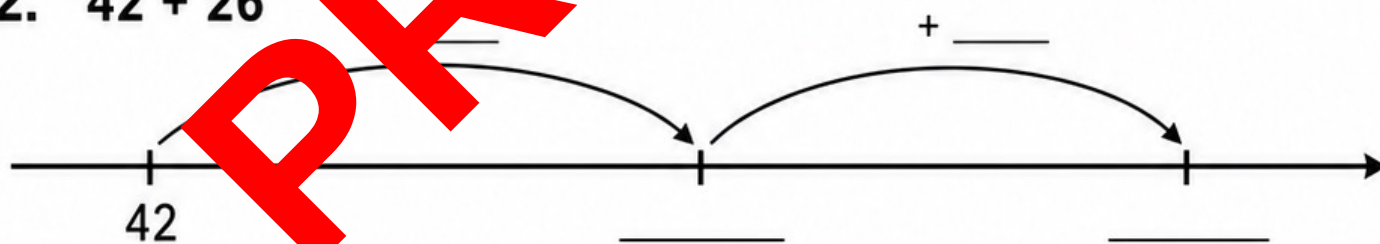
$$34 + 23 = 57$$

1. $27 + 31$



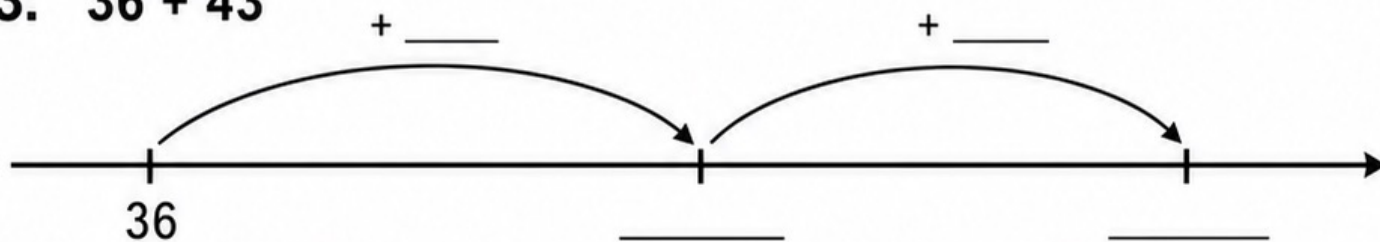
$$27 + 31 = \underline{\hspace{2cm}}$$

2. $42 + 26$



$$42 + 26 = \underline{\hspace{2cm}}$$

3. $36 + 43$



$$36 + 43 = \underline{\hspace{2cm}}$$

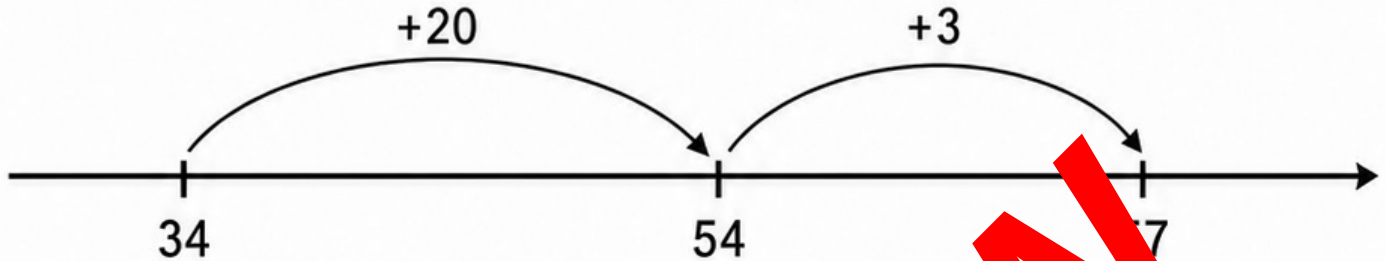
Name: _____ **ANSWERS**

Jump Strategy: Tens Then Ones

Start at the first number. Jump the tens, then jump the ones.

Example:

$$34 + 23$$



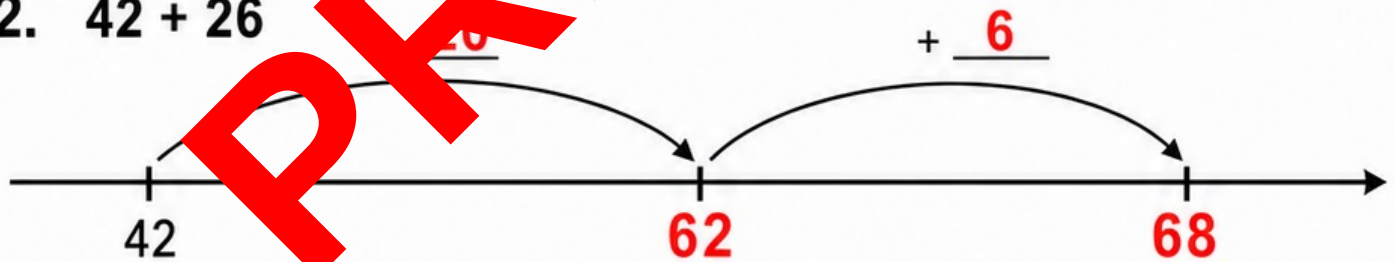
$$34 + 23 = 57$$

1. $27 + 31$



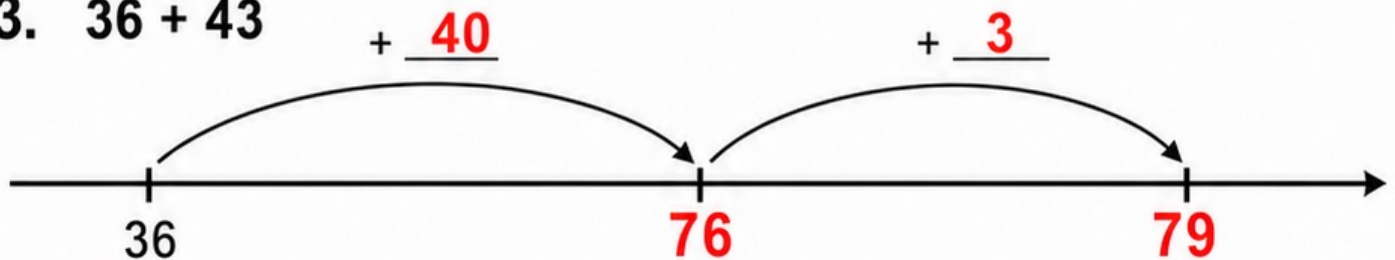
$$27 + 31 = 58$$

2. $42 + 26$



$$42 + 26 = 68$$

3. $36 + 43$



$$36 + 43 = 79$$

Name: _____

Jump Strategy: Choose Your Jumps

Label efficient jumps and show the total.

You may jump by tens, ones, or to a friendly number.



1. $48 + 27$



$48 + 27 = \underline{\hspace{2cm}}$

Why this jump? _____

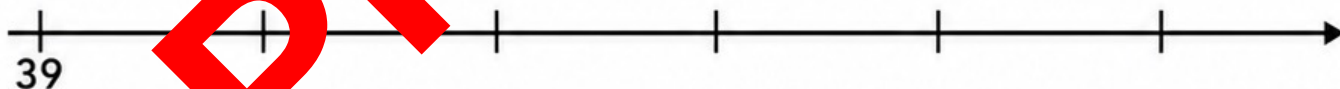
2. $56 + 18$



$56 + 18 = \underline{\hspace{2cm}}$

Why this jump? _____

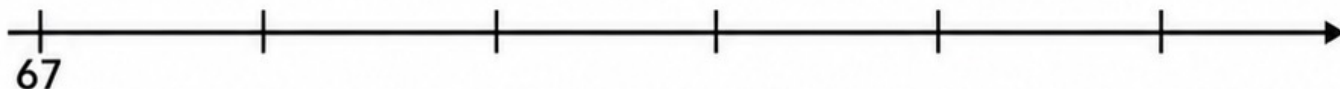
3. $39 + 34$



$39 + 34 = \underline{\hspace{2cm}}$

Why this jump? _____

4. $67 + 25$



$67 + 25 = \underline{\hspace{2cm}}$

Why this jump? _____

Name: ANSWERS

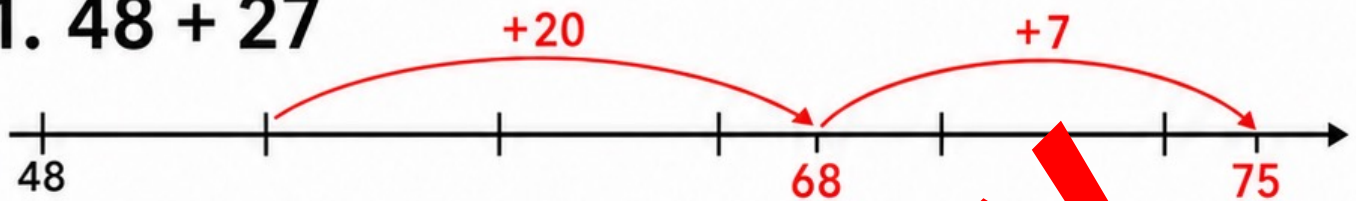
Jump Strategy: Choose Your Jumps

Label efficient jumps and show the total.

You may jump by tens, ones, or to a friendly number.



1. $48 + 27$



$48 + 27 = \underline{75}$

Why this jump? Tens first, then ones.

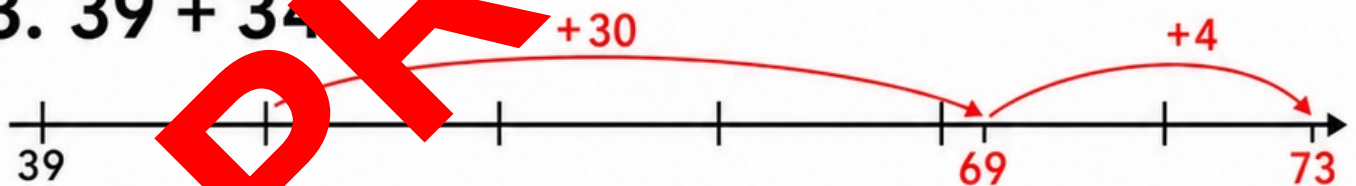
2. $56 + 18$



$56 + 18 = \underline{74}$

Why this jump? Tens first, then ones.

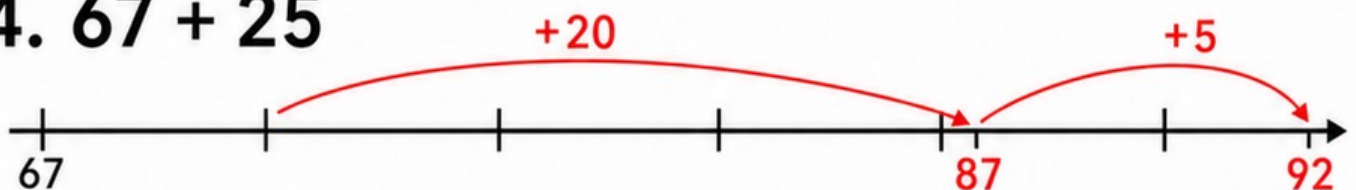
3. $39 + 34$



$39 + 34 = \underline{73}$

Why this jump? Tens first, then ones.

4. $67 + 25$



$67 + 25 = \underline{92}$

Why this jump? Tens first, then ones.



Mental Addition Strategy Mission

Assessment — Page 1



Name: _____

Date: _____

1. Name the strategy

Choose a strategy from the word bank for each worked example.



Turnaround • Make Ten • Near Double • Add Ten • Split • Jump

1.	A. $7 + 9 = 9 + 7$	Strategy: _____
2.	B. $8 + 6 = 8 + 2 + 4$	Strategy: _____
3.	C. $6 + 7 = 6 + 6 + 1$	Strategy: _____
4.	D. $43 + 10 = 53$	Strategy: _____
5.	E. $32 + 24 = (30 + 20) + (2 + 4)$	Strategy: _____
6.	F. $45 + 23 = 20, +$	Strategy: _____

2. Solve mentally

Write the total and name the strategy you used.



1. $9 + 7 =$ _____ Strategy: _____

2. $8 + 8 =$ _____ Strategy: _____

3. $34 + 10 =$ _____ Strategy: _____

4. $5 + 5 + 8 =$ _____ Strategy: _____



Mental Addition Strategy Mission

Assessment — Page 1



Name: ANSWERS

Date: _____

1. Name the strategy

Choose a strategy from the word bank for each worked example.



Turnaround • Make Ten • Near Double • Add Ten • Split • Jump

1.	A. $7 + 9 = 9 + 7$	Strategy: <u>Turnaround</u>
2.	B. $8 + 6 = 8 + 2 + 4$	Strategy: <u>Make Ten</u>
3.	C. $6 + 7 = 6 + 6 + 1$	Strategy: <u>Near Double</u>
4.	D. $43 + 10 = 53$	Strategy: <u>Add Ten</u>
5.	E. $32 + 24 = (30 + 20) + (2 + 4)$	Strategy: <u>Split</u>
6.	F. $45 + 23 = 20, +$	Strategy: <u>Jump</u>

2. Solve mentally

Write the total and name the strategy you used.



1. $9 + 7 =$ 16 Strategy: Make Ten

2. $8 + 8 =$ 16 Strategy: Double

3. $34 + 10 =$ 44 Strategy: Add Ten

4. $5 + 5 + 8 =$ 18 Strategy: Make Ten

Mental Addition Strategy Mission

Assessment — Page 2

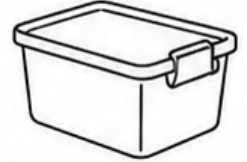
Name: _____

Date: _____

Show a mental strategy. Write enough working to explain your thinking.

- 1** A class collected 28 blue counters and 35 red counters.
How many counters were collected altogether?

Strategy: _____



Answer: _____ counters

- 2** Mia has 46 stickers and gets 27 more.
How many stickers does she have now?

Strategy: _____



Answer: _____ stickers

- 3** Solve $17 + 6 + 3$.
Pair I added first _____

Answer: _____

- 4** Solve $38 + 24$ in two different ways.

Method 1

Method 2

Circle the method you prefer and explain why:

Answer: _____

Mental Addition Strategy Mission

Assessment — Page 2

Name: _____ **ANSWERS**

Date: _____

Show a mental strategy. Write enough working to explain your thinking.

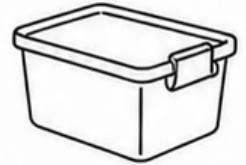
- 1** A class collected 28 blue counters and 35 red counters.
How many counters were collected altogether?

Strategy: Split.

$$20 + 30 = 50$$

$$8 + 5 = 13$$

$$50 + 13 = 63$$



Answer: 63 counters

- 2** Mia has 46 stickers and gets 27 more.
How many stickers does she have now?

Strategy: Jump.

$$46 + 20 = 66$$

$$66 + 7 = 73$$



Answer: 73 stickers

- 3** Solve $17 + 6 + 3$

Pair I added first: 17

$$17 + 3 =$$

$$20 + 6 = 26$$

Answer: 26

- 4** Solve $38 + 24$ in two different ways.

Method 1

$$\text{Split: } 30 + 20 = 50;$$

$$8 + 4 = 12;$$

$$50 + 12 = 62.$$

Method 2

$$\text{Jump: } 38 + 20 = 58;$$

$$58 + 4 = 62.$$

Circle the method you prefer and explain why:

Jump is quick because I add 20, then 4.

Answer: 62

Mental Addition Strategies Rubric



Criteria	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
1. Addition facts within 20	Needs support to solve facts.	Solves some facts with materials.	Solves most facts accurately.	Recalls facts fluently.	Applies facts flexibly and explains patterns.
2. Selects an efficient mental strategy	Needs a strategy prompt.	Chooses a familiar strategy with support.	Chooses a suitable strategy.	Chooses an efficient strategy and compares choices.	Justifies the most efficient strategy.
3. Uses place value to split or jump with two-digit numbers	Needs support to partition numbers.	Splits tens and ones with prompts.	Splits or jumps accurately.	Regroups and chooses efficient jumps.	Combines place-value strategies flexibly.
4. Represents and explains thinking	Shows limited working.	Uses a model with prompts.	Shows clear working and uses maths words.	Explains steps with a clear representation.	Connects representations and gives precise reasoning.
5. Checks accuracy and solves context problems	Needs support to check or solve contexts.	Checks when prompted and solves simple contexts.	Solves contexts and usually checks.	Checks independently and explains the answer.	Verifies efficiently in more than one way.

Student: _____

Date: _____

Teacher: _____

Mental Addition Strategies



Our Learning Goal

We are learning to choose flexible mental strategies for addition.

- Solve addition facts accurately.
- Explain why a strategy is efficient.
- Check the total in another sensible way.



Our Strategy Toolbox

Turnarounds • Make Ten • Look for Tens

Add Ten • Doubles • Near Doubles

Split • Jump

A strong mathematician chooses a clear path, not always the same path.



Turnarounds

The addends can change order without changing the total.

$$4 + 7 = 7 + 4 = 11$$

Turn the fact around when the new one is easier to think about.



Your Turn: Turn It Around

Reverse each fact, then solve.

- $3 + 8$
- $5 + 9$
- $12 + 7$

What stayed the same?



Use a Double

Doubles are fast facts with two equal addends.

$$6 + 6 = 12$$

$$8 + 8 = 16$$

Known doubles help us solve new math facts.



Use a Near Double

Double the smaller number, then add 1.

$$7 + 8 = 7 + 7 + 1$$

$$14 + 1 = 15$$

Try: $6 + 7$ and $9 + 10$.



Make Ten Facts

Pairs that make 10 are powerful mental facts.

$$1 + 9 \bullet 2 + 8 \bullet 3 + 7$$

$$4 + 6 \bullet 5 + 5$$

Use a pair to fill 10 before adding what is left.



Bridge Through Ten

Solve $8 + 5$.

Split 5 into 2 and 3.

$$8 + 2 + 3 = 10 + 3 = 13$$

We bridged to 10, then added the remainder.



Your Turn: Bridge Through 10

Split the second addend to fill 10.

- $9 + 4$
- $7 + 6$
- $8 + 7$

Show the split and the total



Look for Tens

With three addends, pair numbers that make the number ten.

$$6 + 4 + 7$$

$$10 + 7 = 17$$

Changing the order can make the calculation



Your Turn: Look for Tens

Circle the useful pair, then solve.

- $3 + 7 + 6$

- $8 + 2 + 9$

- $5 + 5 + 7$

Which pair did you add first?



Add Ten

Adding 10 increases the tens digit by 1.

The ones digit stays the same.

$$36 + 10 = 46$$

Think: one more ten, no extra ones.



Your Turn: Addition

Solve mentally and explain the place-value pattern.

- $24 + 10$
- $57 + 10$
- $83 + 10$



Split Strategy

Partition each addend into tens and ones.

Add the tens. Add the ones.

Combine the two subtotals.

This keeps place value visible.



Split: Worked Example

$$32 + 25$$

$$\text{Tens: } 30 + 20 = 50$$

$$\text{Ones: } 2 + 5 = 7$$

$$\text{Combine: } 50 + 7 = 57$$



Split and Regroup

$$38 + 27$$

$$\text{Tens: } 30 + 20 = 50$$

$$\text{Ones: } 8 + 7 = 15$$

$$\text{Combine: } 50 + 15 = 65$$

15 ones is 1 ten and 5 ones



Your Turn: Split Strategy

Split each addend into tens and ones.

- $41 + 26$
- $46 + 28$
- $35 + 47$

Check whether the ones need regrouping.



Jump Strategy

Start at the first addend on an open number line.

Jump the tens, then jump the ones.

Label every jump and landing number.

Choose jumps that are easy to track.



Jump: Worked Example

$$34 + 23$$

Start at 34.

Jump +20 to 54.

Jump +3 to 57.

Therefore, $34 + 23 = 57$.



Your Turn: Jump Strategy

Show a tens jump, then an ones jump.

- $27 + 31$
- $42 + 26$
- $48 + 27$

Label the intermediate and final value.



Compare Split and Jump

Solve $46 + 28$ in two ways.

Split: $(40 + 20) + (6 + 8) = 60 + 14 = 74$

Jump: $46 + 20 = 66$; $66 + 8 = 74$

Both methods agree. Which feels nearer to you?



Pick an Efficient Strategy

Match each fact to a sensible strategy.

- $8 + 7$
- $34 + 10$
- $27 + 31$
- $5 + 5 + 8$

Explain why your choice is efficient.



Apply It to a Context

A class collected 28 blue counters and 35 red counters.

How many counters were collected altogether?

Choose Split or Jump and show the mental steps.

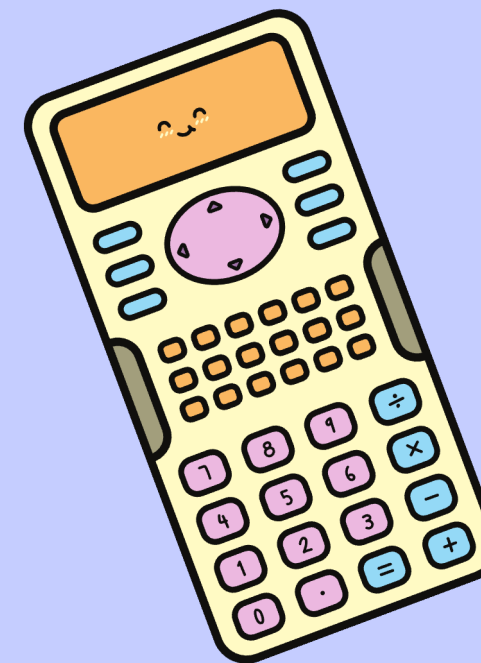
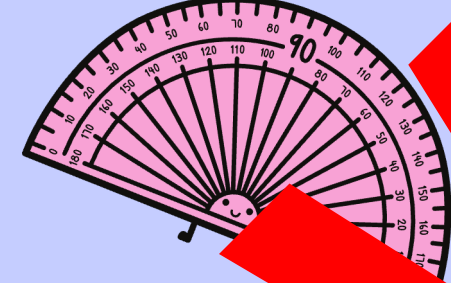
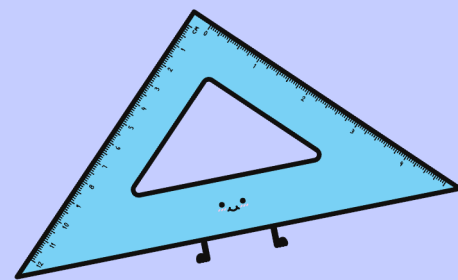
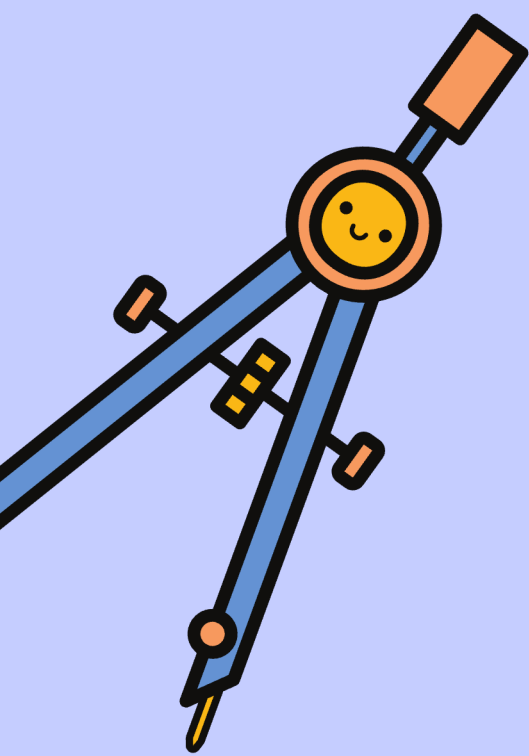
Check that your total is reasonable.



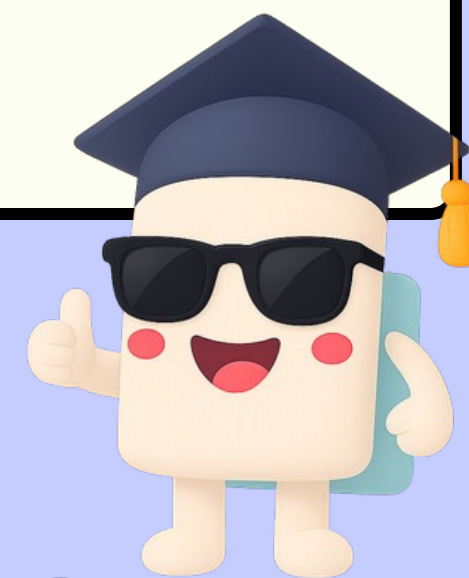
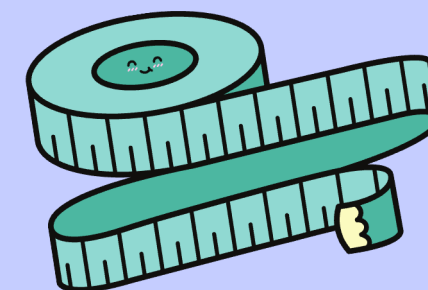
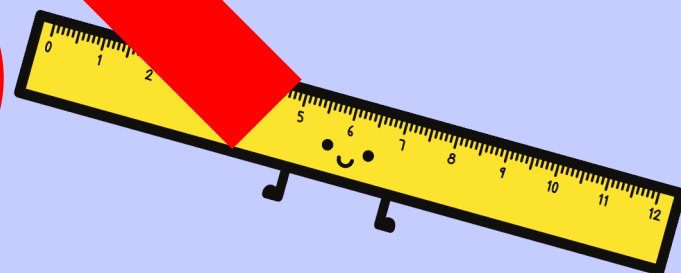
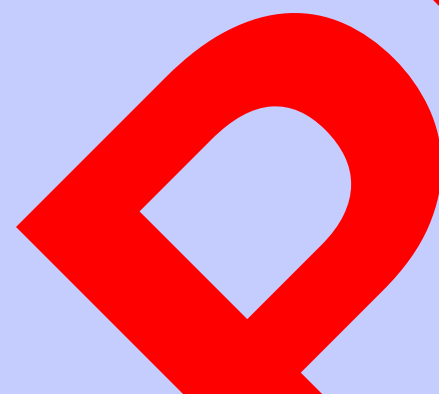
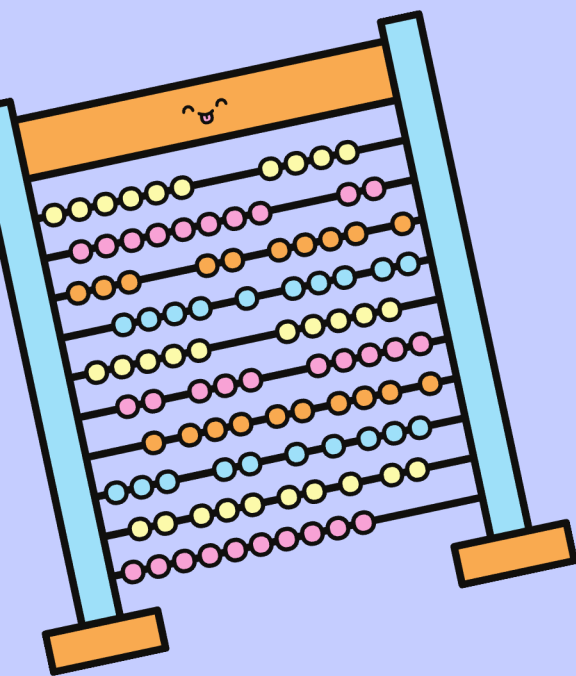
Exit Ticket

1. Solve $17 + 6 + 3$.
2. Solve $39 + 24$.
3. Name one strategy you prefer.
4. Explain when that strategy is useful.





You are a Mental Addition Strategist!



Mental Addition Strategies

Quiz



Question 1 – Multiple Choice

Which is the turnaround of $6 + 8$?

A. $8 + 6$

B. $6 + 6$

C. $8 + 8$

D. $14 + 6$



Answer 1

A. $8 + 6$

Changing the order does not change the total.

$$6 + 8 = 8 + 6 = 14$$



Question 2 – True or False

$9 + 6$ can be rewritten as $9 + 1 + 5$.

True or false?

Be ready to explain the split.



Answer 2

True.

Split 6 into 1 and 5.

$$9 + 1 + 5 = 10 + 5 = 15$$



Question 3 – Short Answer

Use a near double to solve $7 + 8$.
Show the double you know.



Answer 3

$$7 + 7 + 1 = 15$$

The known double is $7 + 7 = 14$.



Question 4 – Multiple Choice

Which pair should you add first in $4 + 6 + 7$?

- A. $4 + 6$
- B. $6 + 7$
- C. $4 + 7$
- D. Add all three at once



Answer 4

A. $4 + 6$

That pair makes 10.

$$10 + 7 = 17$$



Question 5 – Short Answer

What is $34 + 10$?

Explain what happens to the tens and ones digits.



Answer 5

44

The tens digit increases by 1.

The ones digit stays the same.



Question 6 – Multiple Choice

Which split is correct for $26 + 35$?

- A. $(20 + 30) + (6 + 5)$
- B. $(20 + 30) + (6 + 3)$
- C. $(26 + 30) + 3$
- D. $(20 + 35) + (2 + 6)$



Answer 6

$$A. (20 + 30) + (6 + 5)$$

$$50 + 11 = 61$$



Question 7 – True or False

Starting at 23, jumping +10 and then +6 gives 39.

True or false?



Answer 7

True.

$$23 + 10 = 33$$

$$33 + 6 = 39$$



Question 8 – Short Answer

Use a double to solve $8 + 8$.



Answer 8

$$8 + 8 = 16$$

This is a known double fact.



Question 9 – Multiple Choice

Which strategy is most direct for $48 + 10$?

- A. Add Ten
- B. Near Double
- C. Split
- D. Turnaround



Answer a

A. Add Ten

$$48 + 10 = 58$$

The ones stay 8; the tens increase by



Question 10 – Show Your Thinking

There are 27 red counters and 15 blue counters.
How many counters are there altogether?
Show one mental strategy.



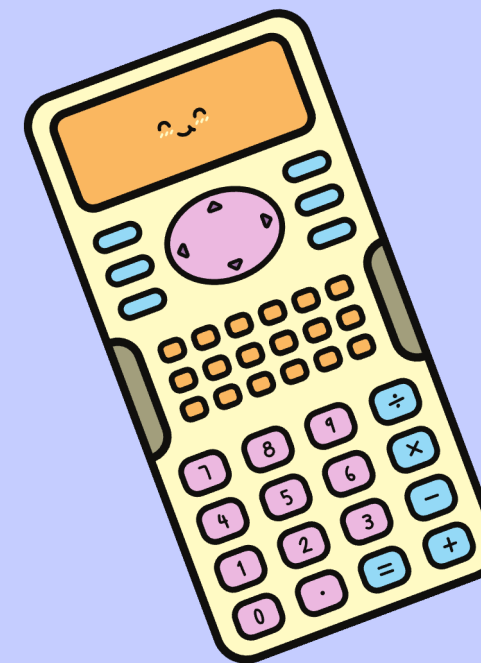
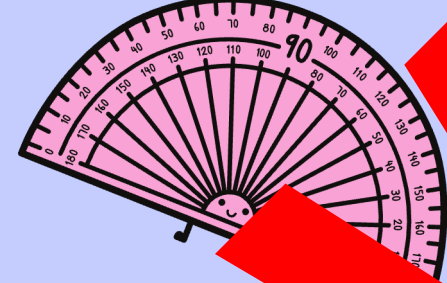
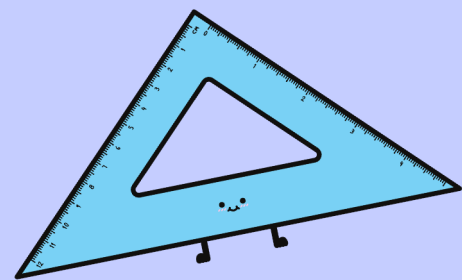
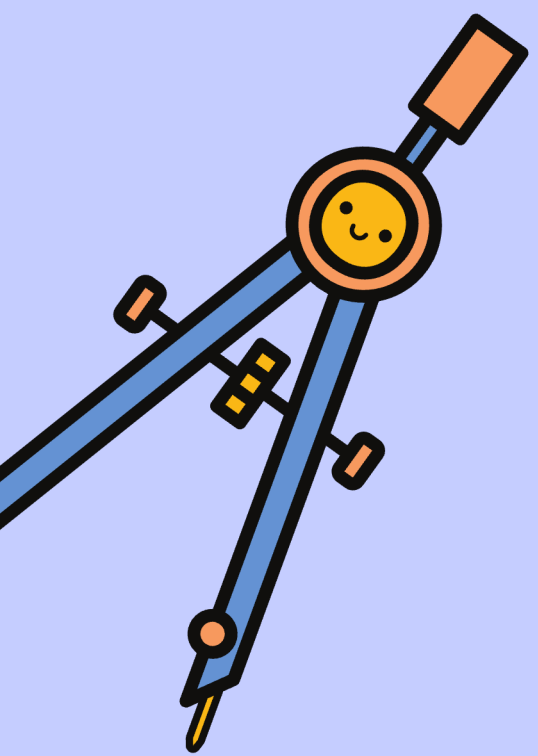
Answer 10

42 counters

One valid method is $27 + 10 + 5$.

$27 + 10 = 37$; $37 + 5 = 42$





Quiz Complete!

