

ADDITION AND SUBTRACTION

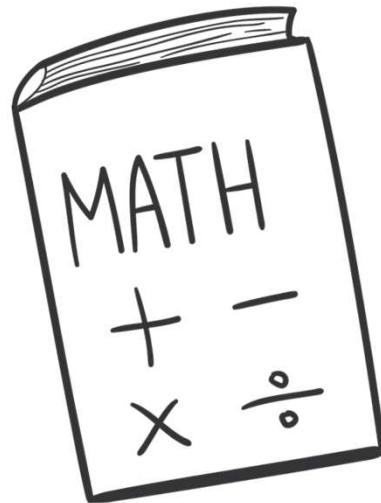
EXPANDED FORM ADDITION

LESSON 3

TODAY'S OBJECTIVE

Today, we will add 3-digit numbers using expanded form.

TAKE OUT YOUR **MATH JOURNALS**





WATCH ME FIRST



Today we are going to use expanded form to add numbers.

$$252 + 268 = ?$$



Did You Know?

Expanded form is a way we can write a number by adding the place value of its digits.

Using expanded form can help us add numbers that have multiple digits.

$$483 = 400 + 80 + 3$$



Solve using expanded form: $148 + 162$

Addend #1 = 148

Addend #2 = 162

Partial Sums

Hundred(s) =

+

=

+

Ten(s) =

+

=

+

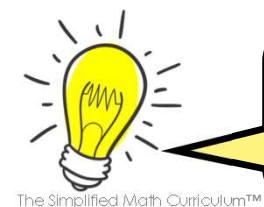
One(s) =

+

=

Total Sum =

I'll start by writing the first addend in expanded form.





Solve using expanded form: $148 + 162$

Addend #1 = 148

Addend #2 = 162

Partial Sums

Hundred(s) =

+

=

+

Ten(s) =

+

=

+

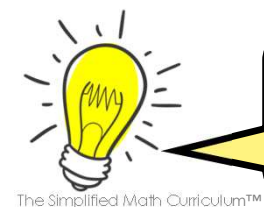
One(s) =

+

=

Total Sum =

I'll do the same with the second addend.





Solve using expanded form: $148 + 162$

Addend #1 = 148

Addend #2 = 162

Partial Sums

Hundred(s) = 100 + 100 = 200

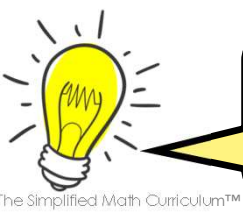
Ten(s) = 40 + 60 = 100

One(s) = 8 + 2 = 10

+

+

Total Sum =



Now, I'll add the place value of each digit to get partial sums.



Solve using expanded form: $148 + 162$

Addend #1 = 148

Addend #2 = 162

Partial Sums

Hundred(s) = $\boxed{100}$ + $\boxed{100}$ = $\boxed{200}$

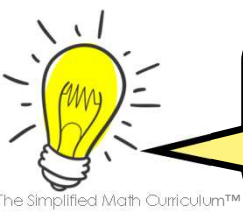
Ten(s) = $\boxed{40}$ + $\boxed{60}$ = $\boxed{100}$

One(s) = $\boxed{8}$ + $\boxed{2}$ = $\boxed{10}$

+

+

Total Sum = $\boxed{310}$



Finally, I'll add all of the partial sums to get the total sum.



LET'S WORK TOGETHER

Solve using expanded form: 123 + 177

	Addend #1 = 123		Addend #2 = 177		Partial Sums
Hundred(s) =		+		=	
					+
Ten(s) =		+		=	
					+
One(s) =		+		=	
Total Sum =					

Solve using expanded form: $123 + 177$

Addend #1 = 123

Addend #2 = 177

Partial Sums

Hundred(s) = + =


+

Ten(s) = + =

+

One(s) = + =

Total Sum =

 What is the expanded form of 123?

Solve using expanded form: $123 + 177$

Addend #1 = 123

Addend #2 = 177

Partial Sums

Hundred(s) = + =

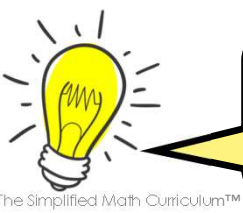
+

Ten(s) = + =

+

One(s) = + =

Total Sum =



What is the expanded form of 177?

Solve using expanded form: $123 + 177$

Addend #1 = 123

Addend #2 = 177

Partial Sums

Hundred(s) = 100 + 100 = 200


+

Ten(s) = 20 + 70 = 90

+

One(s) = 3 + 7 = 10

Total Sum =

 What are the partial sums?

 **Problem #1**
LET'S WORK TOGETHER

Solve using expanded form: $123 + 177$

Addend #1 = 123

Addend #2 = 177

Partial Sums

Hundred(s) = 100 + 100 = 200

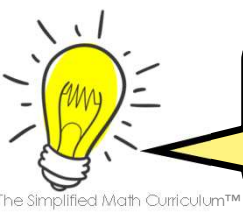
+

Ten(s) = 20 + 70 = 90

+

One(s) = 3 + 7 = 10

Total Sum = 300



What is the total sum?

CHECK - IN

- What did you notice?
- Can you make a connection to anything else you already know? How?
- Do you have any questions?



IT'S YOUR TURN

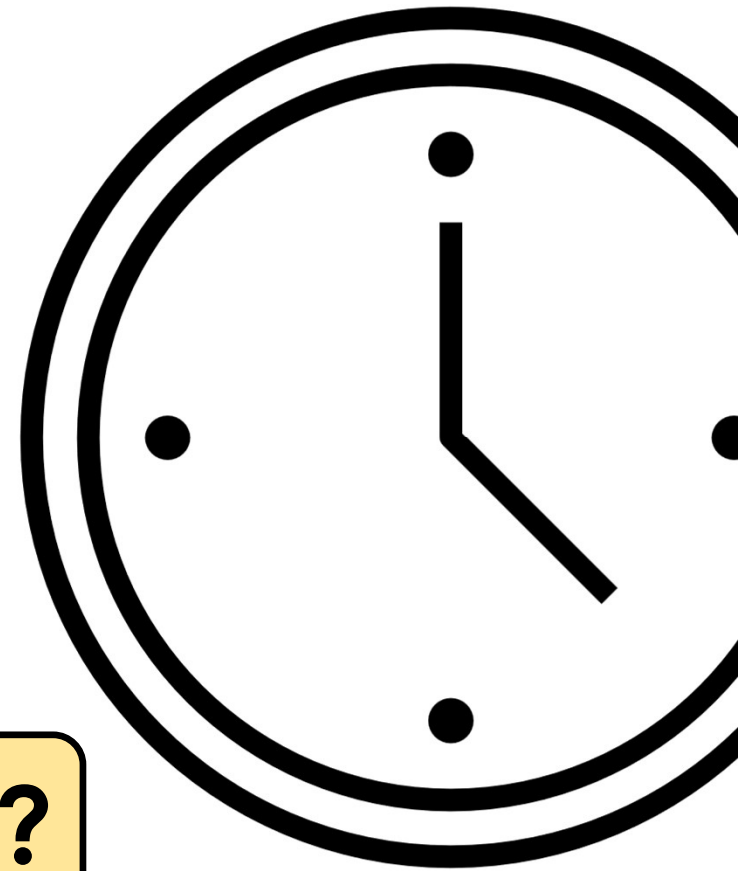


Now it's **“YOUR TURN”** to Solve



Don't forget to explain your thinking!

Time to **Discuss** and **Check** Your Answers



How did you solve?



Problem #1
YOUR TURN

Solve using expanded form: $387 + 368$

Addend #1 = 387

Addend #2 = 368

Partial Sums

Hundred(s) =

+

=

+

Ten(s) =

+

=

+

One(s) =

+

=

Total Sum =



Problem #1

YOUR TURN

Solve using expanded form: $387 + 368$

Addend #1 = 387

Addend #2 = 368

Partial Sums

Hundred(s) =

300

+

300

=

600

+

Ten(s) =

80

+

60

=

140

+

One(s) =

7

+

8

=

15

Total Sum =

755



Problem #2

Solve using expanded form: $460 + 143$

Addend #1 = 460

Addend #2 = 143

Partial Sums

Hundred(s) = + =

+

Ten(s) = + =

+

One(s) = + =

Total Sum =



Problem #2

Solve using expanded form: $460 + 143$

Addend #1 = 460

Addend #2 = 143

Partial Sums

Hundred(s) = $\boxed{400}$ + $\boxed{100}$ = $\boxed{500}$

+

Ten(s) = $\boxed{60}$ + $\boxed{40}$ = $\boxed{100}$

+

One(s) = $\boxed{0}$ + $\boxed{3}$ = $\boxed{3}$

Total Sum = $\boxed{603}$



Problem #3

Solve using expanded form: $557 + 264$

Addend #1 = 557

Addend #2 = 264

Partial Sums

Hundred(s) =

+

=

+

Ten(s) =

+

=

+

One(s) =

+

=

Total Sum =



Problem #3

Solve using expanded form: $557 + 264$

Addend #1 = 557

Addend #2 = 264

Partial Sums

$$\text{Hundred(s)} = \boxed{500} + \boxed{200} = \boxed{700}$$

+

$$\text{Ten(s)} = \boxed{50} + \boxed{60} = \boxed{110}$$

+

$$\text{One(s)} = \boxed{7} + \boxed{4} = \boxed{11}$$

$$\text{Total Sum} = \boxed{821}$$



Problem #4

Solve using expanded form: $185 + 451$

Addend #1 = 185

Addend #2 = 451

Partial Sums

Hundred(s) = + =

+

Ten(s) = + =

+

One(s) = + =

Total Sum =



Problem #4

Solve using expanded form: $185 + 451$

Addend #1 = 185

Addend #2 = 451

Partial Sums

Hundred(s) = $\boxed{100}$ + $\boxed{400}$ = $\boxed{500}$

+

Ten(s) = $\boxed{80}$ + $\boxed{50}$ = $\boxed{130}$

+

One(s) = $\boxed{5}$ + $\boxed{1}$ = $\boxed{6}$

Total Sum = $\boxed{636}$



Problem #5

Solve using expanded form: $449 + 273$

Addend #1 = 449

Addend #2 = 273

Partial Sums

Hundred(s) =

+

=

+

Ten(s) =

+

=

+

One(s) =

+

=

Total Sum =



Problem #5

Solve using expanded form: $449 + 273$

Addend #1 = 449

Addend #2 = 273

Partial Sums

Hundred(s) =

400

+

200

=

600

+

Ten(s) =

40

+

70

=

110

+

One(s) =

9

+

3

=

12

Total Sum =

722



Problem #6

Solve using expanded form: 205 + 648

Addend #1 = 205

Addend #2 = 648

Partial Sums

Hundred(s) =

+

=

+

Ten(s) =

+

=

+

One(s) =

+

=

Total Sum =



Problem #6

Solve using expanded form: $205 + 648$

Addend #1 = 205

Addend #2 = 648

Partial Sums

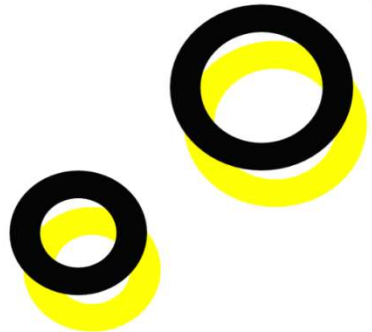
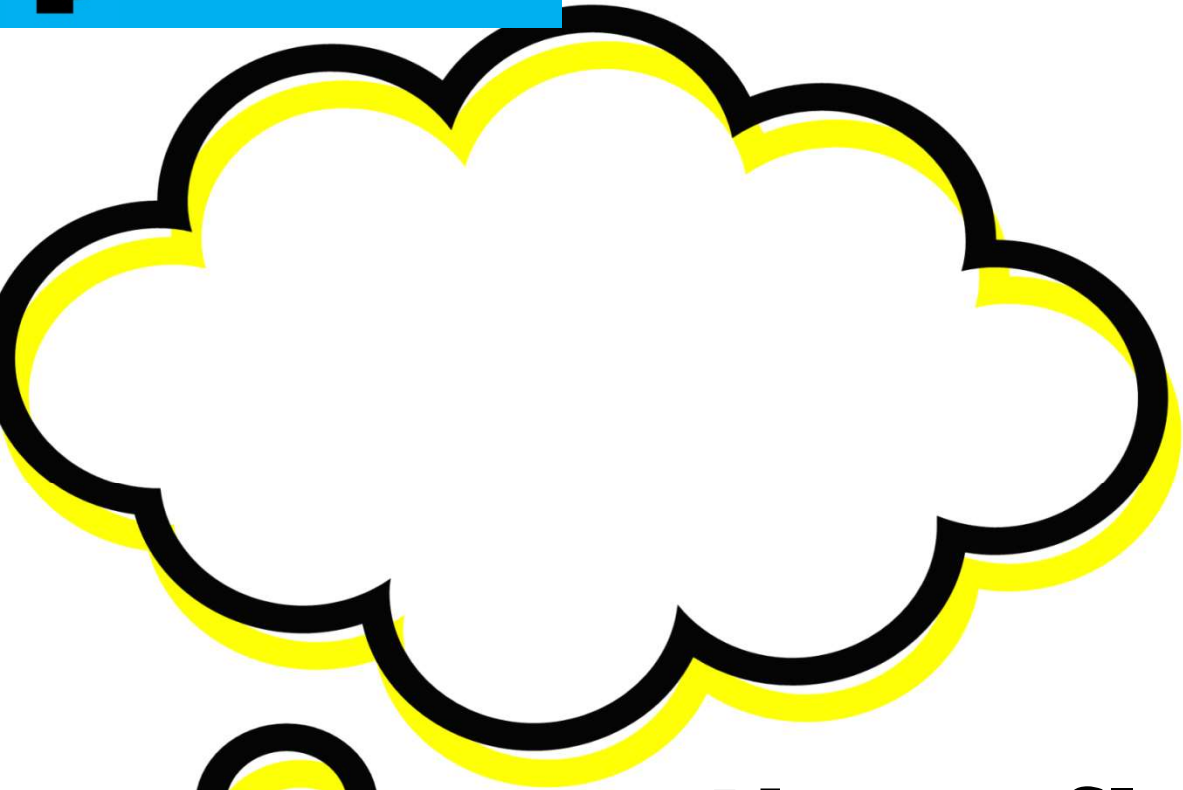
Hundred(s) = $\boxed{200} + \boxed{600} = \boxed{800}$

Ten(s) = $\boxed{0} + \boxed{40} = \boxed{40}$

One(s) = $\boxed{5} + \boxed{8} = \boxed{13}$

Total Sum = $\boxed{853}$

 **Let's Reflect**



It's reflection time!