

Equivalent Addition Subtraction Number Sentences.

Table of Contents

Teaching Plan Overview and Summary.....	page 2
Equivalent Addition Subtraction Number Sentences.....	page 3

Differentiate and Assess

Not every student will be ready to investigate this concept at this Level and so we will need to differentiate to ensure every student is learning at their leading edge. Select the Differentiate button on this screen.

Integrate

Every mathematical concept is integrally related to other mathematical concepts. Teaching and learning related concepts simultaneously develops deep relational understanding. Select the Integrate button on this screen.

Intervene

Some students may not yet be ready to investigate this concept at any Level, and so we will need to provide some intervention. Select the Intervention button on this screen.

EQUIVALENT ADDITION SUBTRACTION NUMBER SENTENCES.

EXPLICIT TEACHING PLAN OVERVIEW PAGE

THIS PAGE IS A SUMMARY OF THE EXPLICIT TEACHING PLAN, INCLUDING STRATEGIC QUESTIONS, AND DESCRIBING THE SEQUENCE WHICH WILL OCCUR OVER MULTIPLE LESSONS.

RESOURCES: PLAYING CARDS,PENCIL, PAPER

WHAT COULD WE DO?

Children:

- solve an unknown quantity problem, for example, 'When a number is added to 23, the answer is the same as 57 minus 19. What is the number?'
- record an equivalent number sentence to match the problem, for example,
 $\underline{\quad} + 23 = 57 - 19$
- solve one side of the equals sign, for example, $\underline{\quad} + 23 = 38$
- use their understanding of 3 ways to find difference to find the missing number, for example,



WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?

Children

- ask one another questions about using equivalent number sentences involving addition and subtraction to find unknown quantities., for example:
 - How can we record a sentence with an unknown number?
 - What part of the sentence means equals?
 - Could we record 57 minus 19 on one side of the equals sign?
 - Could we record a number plus 23 on the other side of the equals sign?
 - Is this question asking us what is the difference between 23 and 38?
 - Do we have 3 ways that we can find difference?
 - Could we start at 23 and add until we get to 38?
 - Could we start at 38 and subtract until we get to 23?
 - Could we subtract 23 from 38?
- What number is missing from the number sentence?

EQUIVALENT ADDITION SUBTRACTION NUMBER SENTENCES.

EXPLICIT TEACHING PLAN

FULL EXPLICIT TEACHING PLAN, EMBEDDING DEEP RELATIONAL UNDERSTANDING, METALANGUAGE, AND QUESTIONS THAT MAY BE USED OVER MULTIPLE LESSONS.

WHAT COULD WE DO?	WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?
<p>Children think about, talk and listen to a friend about, then have the opportunity to share what they already know.</p> <p>Display an equals sign =</p> <p>Record, for example, When a number is added to 23, the answer is the same as 57 minus 19. What is the number?</p> <p>Record an equals sign, for example, =</p>	<ul style="list-style-type: none">▶ Today brings an investigation about equivalent number sentences involving addition and subtraction.▶ What do you know about equivalent number sentences involving addition and subtraction?▶ Talk about equivalent number sentences involving addition and subtraction with a friend.▶ Is anyone ready to share what they are thinking about equivalent number sentences involving addition and subtraction?▶ We've investigated the equals symbol.▶ And we found the equals symbol means equality ▶ Today we're going to investigate how we can use equivalent number sentences involving addition and subtraction to find an unknown number.▶ Here we have a problem: When a number is added to 23, the answer is the same as 57 minus 19. What is the number?▶ How could we record this as an equivalent number sentence?▶ Could we record an equals sign?

Point to 'the answer is the same as', for example, When a number is added to 23, the answer is the same as 57 minus 19. What is the number?



Point to 57 minus 19, for example, When a number is added to 23, the answer is the same as 57 minus 19. What is the number?



Record, for example, $\quad = 57 - 19$

Point to a number is added to 23, for example, When a number is added to 23, the answer is the same as 57 minus 19. What is the number?

Record, for example, $\quad + 23 = 57 - 19$



Record, for example, $\quad + 23 = 57 - 19$

Record, for example, $\quad + 23 = 38$

- ▶ What part of the problem means 'equal'?
- ▶ Does 'the answer is the same as' mean 'equal'?

- ▶ What is the answer the same as?
- ▶ Is the answer the same as 57 minus 19

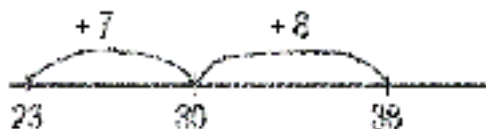
- ▶ Could we record 57 minus 19 on one side of the equals sign?

- ▶ What is 57 minus 19 equal to?
- ▶ Is 57 minus 19 equal to a number added to 23?
- ▶ Could we record a number plus 23 on the other side of the equals sign?

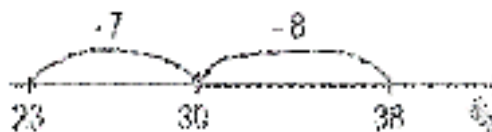
- ▶ What does our equivalent number sentence say?
- ▶ Does our equivalent number sentence say 'a number plus 23 equals 57 minus 19'?

- ▶ How could we solve our equivalent number sentence?
- ▶ Could we solve 57 minus 19 first?
- ▶ What does 57 minus 19 equal?
- ▶ Does 57 minus 19 equal 38?
- ▶ So one side of our equals sign equals 38.
- ▶ What does the other side of our equals sign have to equal?

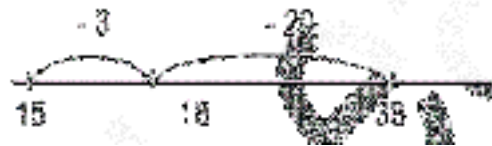
Record, for example,



Record, for example,



Record, for example,



Record, for example, $15 + 23 = 57 - 19$

- ▶ Does the other side of our equals sign also have to equal 38?
- ▶ What number plus 23 equals 38?
- ▶ Is this question asking us what is the difference between 23 and 38?
- ▶ Do we have 3 ways that we can find difference?
- ▶ Could we start at 23 and add until we get to 38?
- ▶ How many did we add to 23 to make 38?
- ▶ Did we add 15?

- ▶ Could we start at 38 and subtract until we get to 23?
- ▶ How many did we subtract from 38 to make 23?
- ▶ Did we subtract 15?

- ▶ Could we subtract 23 from 38?
- ▶ What is 38 minus 23?
- ▶ Is 38 minus 23, 15?

- ▶ What number is missing from the number sentence?
- ▶ Is 15 the missing number?