



Subtraction Involving Numbers to 100

Mathematical Ideas

Addition and subtraction facts to 20 are foundational for adding and subtracting larger numbers.

The commutative property does not hold true for subtraction.

For example, $5 - 3$ has a different result than $3 - 5$.

The associative property also does not hold true for subtraction.

For example, $(7 - 2) - 5$ has a different result than $7 - (2 - 5)$

The approach in determining the difference may depend on the numbers that are given. The following are examples to illustrate this point.

Example 1: $46 - 35 = ?$

The difference may be determined using a standard algorithm by decomposing each of the numbers by place value and then using known facts to subtract corresponding units.

48	"8 ones subtract 5 ones is 3 ones."
- 35	"4 tens subtract 3 tens is 1 ten."
13	"The difference is thirteen."

Example 2: $97 - 2 = ?$

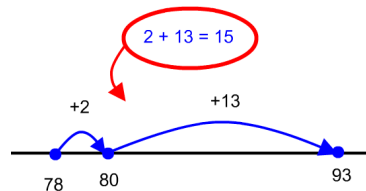
The difference may be determined by counting back two from 97 such that the last count is the result.

97...96, 95

Example 3: $93 - 78 = ?$

The difference may be determined by adding onto 78 using known number facts to get to 93.

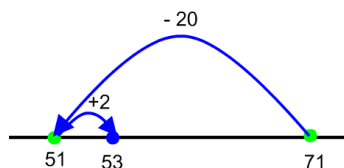
The amount added on is the difference.



Example 4: $71 - 18 = ?$

The difference may be determined by:

- rounding 18 to 20
- subtract 20 from 71
- add 2 back on because two too many were subtracted





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Helpful Information

Tips

- There are many strategies to do develop math facts.
- Learning tools can be used to develop and apply foundational skills and concepts.
 - » the way your child interacts with the tool can reveal your child's thinking
 - » they can be used for your children to communicate their thinking
 - » encourage your child to take the time to use the learning tools in each activity
- Open number lines can be used to communicate thinking (see examples 3 and 4).

Mathematical Words/Symbols

Composing – is when numbers are combined to create a larger number

Decomposing – is when a number is broken down into smaller numbers

Difference – the result of subtraction

Sum or total – the result of addition

+ plus or add

- minus or subtract

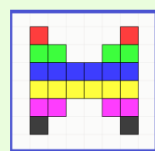
= equals or same as

Materials

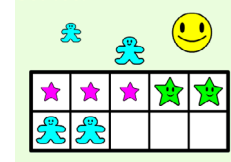
Activity 1:

- Colour Tiles Learning Tool
- Number Cards

Colour Tiles



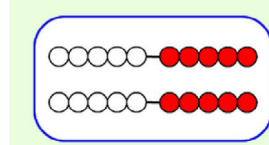
Set Tool



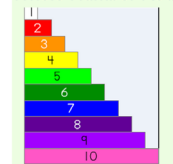
Activity 2:

- Set Learning Tool

Rekenrek



Whole Number Rods



Activity 3:

- Rekenrek Learning Tool

Activity 4:

- Whole Number Rods Learning Tool

Activity 5:

- Catch a Bouncing Ball – Operations game

Catch a Bouncing Ball -
Operations
(Whole Numbers)





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Take Away Colour Tiles

Activity 1

Set Up for the Game:

Number of Players: 2

- Open the Colour Tiles learning tool.
 - » Using the annotation tool, create a chart with the headings in the example.
- Shuffle two sets of number cards 0 to 20 and place face down in a pile.

How to Play the Game:

1. Each player creates a set of 100 tiles.
 - » each player makes the set all one colour
 - » each player uses a different colour
2. Determine which player goes first.
3. Each player takes a turn to:
 - » confirm the number of tiles in the set at the start of the round
 - » picks a card from the pile
 - » takes away that number of tiles from the set
 - » determines the number of tiles left in the set
 - » records the information in the chart
4. The player having the closest number of tiles to zero after 6 rounds, wins the game.

Example:

Player 1

Player 2

Round	# of Tiles	Take Away	Tiles Left
1	100	19	81
2	81		

Round	# of Tiles	Take Away	Tiles Left

Your child may use known facts to determine the number of tiles left at the end of each round.

Let's Talk About It

Look at the set of tiles that is still on the workspace. How many tiles need to be taken away to reach zero?

What cards could be drawn to reach zero?

What is the total number of tiles you took away from your set in the game? How do you know?



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Comparing Numbers Using the Set Tool

Activity 2

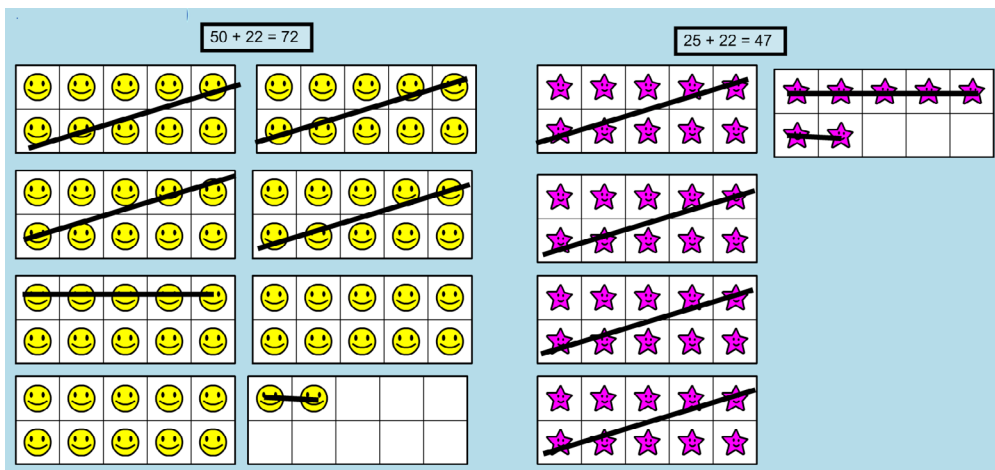
Set Up for the Activity:

- Open the Set learning tool.

How to Do the Activity:

1. Have your child pick two numbers between 21 and 50.
2. Ask your child to determine the sum of these two numbers.
3. Have your child represent the sum using the Set Tool.
4. Have your child pick another two numbers between 21 and 50. Ask your child to find the sum and represent it using the Set Tool.
5. Ask your child:
 - » Which sum is the greatest?
 - » How much greater?
6. Have your child explain how the difference was determined.
7. Repeat activity at least five times.

Example:



Your child may find the sum using place value, adding up the tens and then adding up the ones.

“The sum of 72 is greater than 47 by 25.”

“I found the difference by subtracting 40 from each, then take away 5 from each and then removed 2 from each until I only had 25 yellow happy faces left.”

Let's Talk About It

How did you determine the sum for your first set of numbers?

Did you use a different strategy for your second set of numbers? If not, what did you do?

What is another way you could find the difference between the two sums?



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Determine the Missing Addend Using a Rekenrek

Activity 3

Set Up for the Activity:

- Open the Rekenrek learning tool.
 - » show ten racks of beads

How to Do the Activity:

1. Have your child pick a number between 50 and 100.
2. Ask your child to represent that number on the Rekenrek.
3. Have your child look away as you hide some of the beads using the shade feature. 
4. Ask your child to determine the number of beads hidden.
5. Remove the shade to verify.
6. Repeat activity as desired.

Example:

The number 82 was picked.

20

$4 \times 5 = 20$
 $20 + 8 = 28$

$100 - 20 = 80$
 $80 - 20 = 60$
 $60 - 8 = 52$
 $52 - 10 = 42$
 $42 - 3 = 39$
39 beads are hidden

13

Your child may think of it as 100. Subtract the beads shown including the additional 13.

Let's Talk About It

How did you determine how many beads were hidden?

What is another way to determine the difference between your two numbers?



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Even or Odd Whole Number Rods

Activity 4

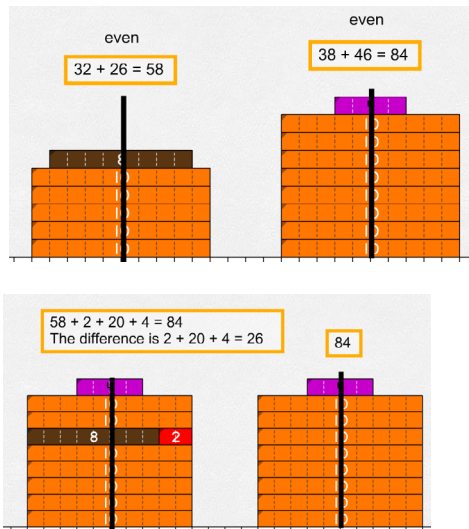
Set Up for the Activity:

- Open the Whole Number Rods learning tool
 - » make sure the grid lines are on
 - » use the annotation tool to create a chart with the headings from the example
- Shuffle two sets of number cards 20 to 50 and place face down in a pile.

How to Do the Activity:

1. Have your child pick two cards and determine the sum of these two cards.
 - » Ask your child to identify if the sum as odd or even.
 - » Ask your child to represent the sum using whole number rods.
 - » Have your child verify if the sum is odd or even.
2. Have your child pick again two cards and determine the sum of these two cards.
 - » Ask your child to identify if the sum as odd or even.
 - » Ask your child to represent the sum using whole number rods.
 - » Have your child verify if the sum is odd or even.
3. Have your child predict if the difference between the two sums is odd or even.
4. Have your child determine the difference between the two sums.
5. Have your child verify the difference as odd or even.
6. Ask your child to record in the chart:
 - » Sum 1
 - » Sum 2
 - » The Difference between Sum 1 and Sum 2
 - » Whether each sum and difference is odd or even
7. Repeat activity as desired.

Example:



Verification: 58 and 84 are both even because they can be split into two equal groups

Your child may determine the difference by adding 2 onto 58 to make 60 and then add on 20 and 4.

Let's Talk About It

What is another way to determine the difference?

Will the difference between two odd numbers always be odd? Explain why or why not.

Will the difference between an odd and an even number, be odd or even? Explain why or why not.



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Catch a Bouncing Ball

Activity 5

Set Up for the Game:

Number of Players: 1

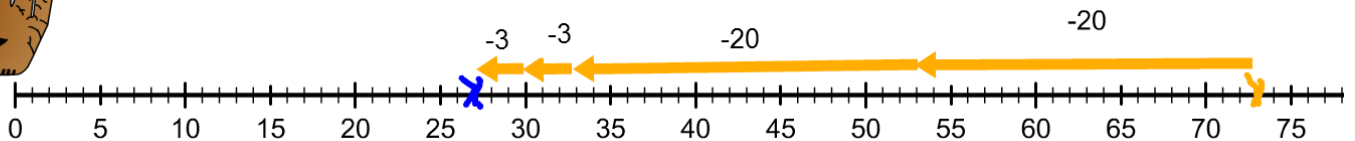
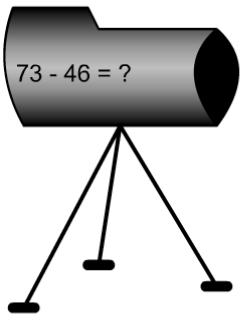
- Open the Catch a Bouncing Ball – Operations game.
 - » Select subtraction and then select numbers to 100.

How to Play the Game:

1. A subtraction expression will appear on the baseball.
2. Move the baseball glove to the location on the number line that represents the difference of the expression.
3. If the location is correct a new expression will appear. If the location is incorrect try to find the correct difference and move the glove to the new location.
4. The game is played until ten balls have been caught.
5. Review any mismatches at the end of the game.

Example:

Your child may take away 20 off of 73, then take away 20, then take away 3, then take away another 3 to work with their known number facts.



Let's Talk About It

How did you know where to put the glove?
What is another way you could figure out the difference?