



Subtraction Involving Numbers to 50

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 $7 - (2 - 5)$

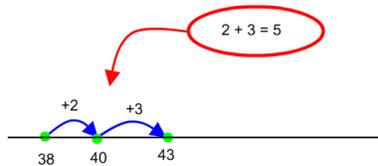
A strategy used to subtract may depend on the numbers.

Example 1: $47 - 2 = ?$

The difference may be determined using a known fact, $7 - 2$ to 5, so $47 - 2 = 45$.
Or the difference may be determined by counting back two from 47.

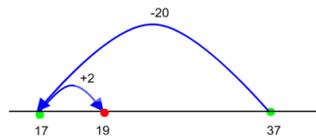
Example 2: $43 - 38 = ?$

The difference may be determined by adding 2 onto 38 to make 40 and then adding on 3 to make 43.



Example 3: $37 - 18 = ?$

The difference may be determined by rounding 18 up to 20 to subtract off of 37 and then add 2 because two too many were removed.



Example 4: $46 - 35 = ?$

The difference may be determined by decomposing each of the numbers by place value and then subtract corresponding parts.

$$\begin{array}{r} 48 \\ - 35 \\ \hline 13 \end{array}$$



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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 2 and 3).

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

Activity 2:

- Set Learning Tool

Activity 3:

- Rekenrek Learning Tool

Activity 4:

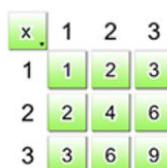
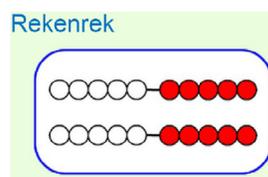
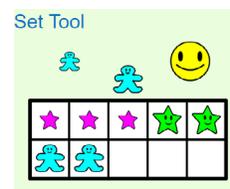
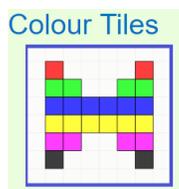
- Whole Number Rods Learning Tool

Activity 5:

- Number Chart
- Representation Cards

Activity 6:

- Catch a Bouncing Ball – Operations game





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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 9 and place face down in a pile.

How to Play the Game:

1. Each player creates a set of 50 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 game is finished when there are no more cards or one player has zero tiles left.

Example:

Player 1

Player 2

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

Round	# of Tiles	Take Away	Tiles Left
1	50	8	42
2	42		

Round	# of Tiles	Take Away	Tiles Left

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 11 and 25.
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 11 and 25. 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:

“The sum of 35 is greater than 29 by 6.”

“I found the difference by subtracting 20 from each, then taking away 5 from each and then removing 4 from each until I only had 6 green happy faces left.”

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

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:

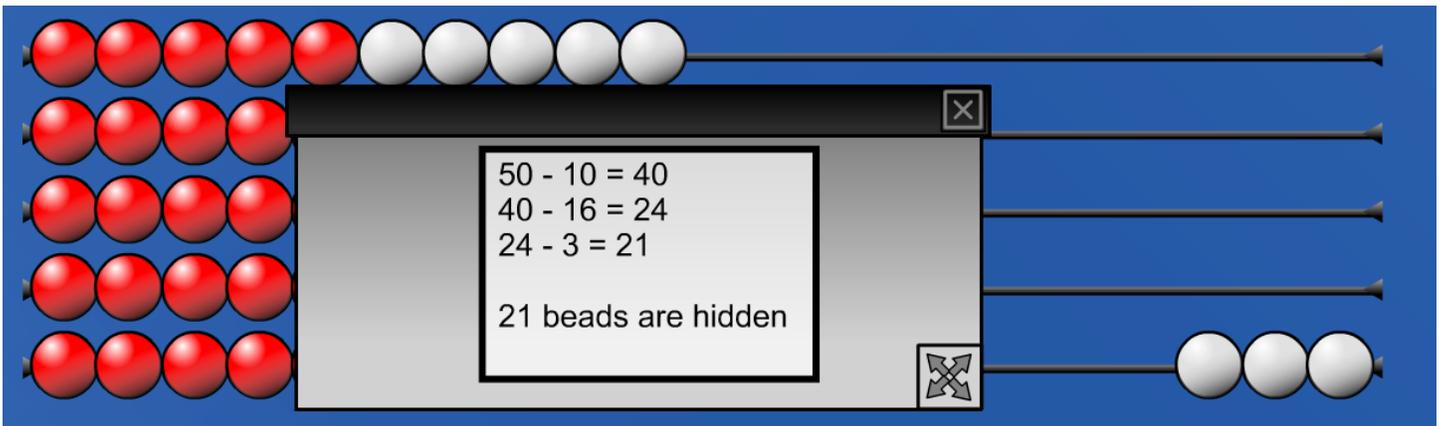
- Open the Rekenrek learning tool.
 - » show five racks of beads

How to Do the Activity:

1. Have your child pick a number between 30 and 50.
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 47 was picked.



Your child may think of it as 50. Subtract the beads shown including the additional 3.

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

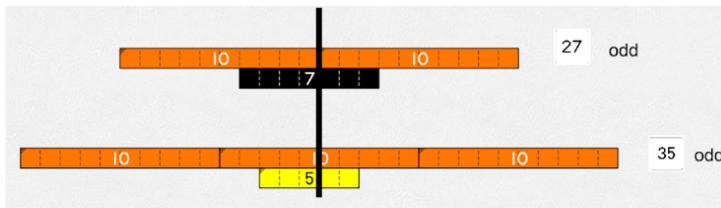
Set Up for the Activity:

- 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.

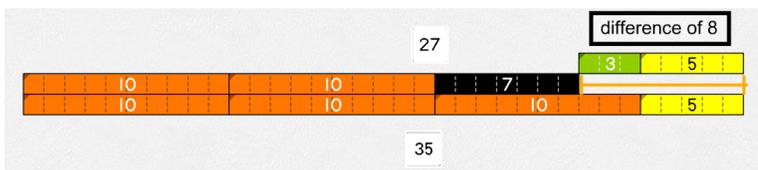
How to Do the Activity:

1. Have your child pick two cards and identify each number as odd or even.
2. Ask your child to represent the two numbers using whole number rods.
3. Have your child verify whether the numbers are odd or even.
4. Have your child predict if the difference between the two numbers is odd or even.
5. Have your child determine the difference between the two numbers.
6. Have your child verify the difference as odd or even.
7. Ask your child to record in the chart:
 - » the two numbers picked
 - » their difference
 - » whether each number and their difference is odd or even
8. Repeat activity as desired.

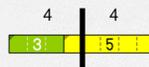
Example:



Verification: 27 and 35 are both odd because they cannot be split into two equal groups



Largest Number	Smallest Number	Difference
35 odd	27 odd	8 even



Your child may determine the difference by adding on to the smaller number to make the larger number.

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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Determining the Difference using the Number Chart

Activity 5

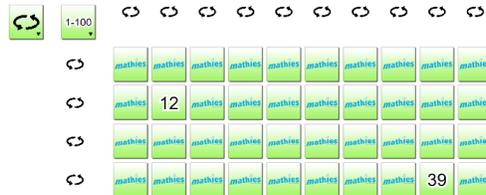
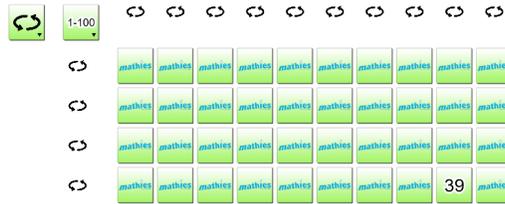
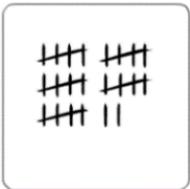
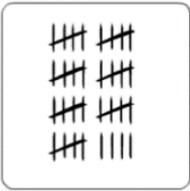
Set Up for the Activity:

- Open the Number Chart.
 - » Select 1 – 100
 - » Choose Hide All
- Shuffle a set of representation cards 20 to 50 and place face down in a pile. Choose a representation – Beads, Tallies or Ten Frames.

How to Do the Activity:

1. Have your child pick two representation cards from the pile.
2. Ask your child what is the difference between the two numbers represented by the cards.
3. Confirm the difference with your child by:
 - » asking your child to flip over the tile on the Number Chart that is the numerical representation of the greatest number of the two representation cards
 - » asking your child to count back from this tile by the number represented on the second card. Note: the difference should be the last card flipped.

Example:



The difference between 39 and 27 is 12.

Your child may count back by tens and then ones to determine the difference.

Let's Talk About It

Do you always need to start with the greatest number to find the difference?
 What is the other subtraction fact that uses these three numbers?



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Catch a Bouncing Ball

Activity 6

Set Up for the Game:

Number of Players: 1

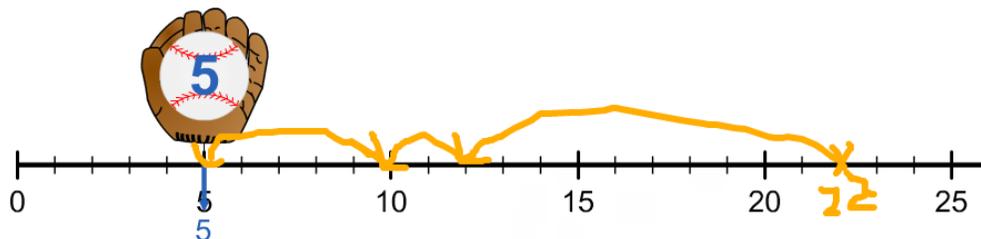
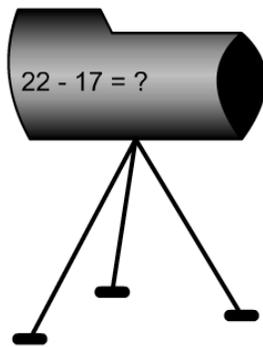
- Open the Catch a Bouncing Ball – Operations game.
 - » Select subtraction and then select numbers to 50.

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 first subtract 10 off of 22, then subtract 2, and then subtract 5.



Let's Talk About It

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