



Addition to 10

Mathematical Ideas

Composing and decomposing numbers, and counting are fundamentals of addition and subtraction.

The following are properties of addition.

1. Identity

$$3 + 0 = 3$$



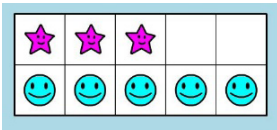
The sum is the number when zero is added to the number.

2. Commutative

$$3 + 5$$

=

$$5 + 3$$



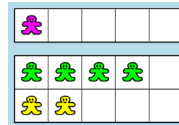
The sum is the same no matter the order of the numbers.

3. Associative

$$(1 + 4) + 2$$

=

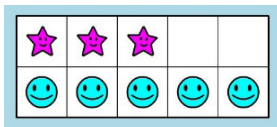
$$1 + (4 + 2)$$



The sum is the same no matter the order in adding.

Examples of strategies to determine the sum of $3 + 5$

Example 1: Counting All



1, 2, 3

1, 2, 3, 4, 5

Example 2: Counting On



Count: 1, 2, 3, 4, 5, 6, 7, 8

Count on from the greatest number: 5...6, 7, 8



Addition to 10

Helpful Information

Tips

- There are many strategies to 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

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

Sum or total – the result of addition

+ plus or add

= equals or same as

Materials

Activity 1:

- Colour Tiles
- Number Cards

Activity 2:

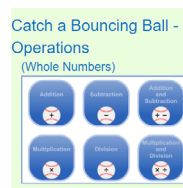
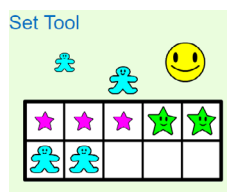
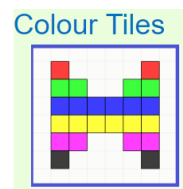
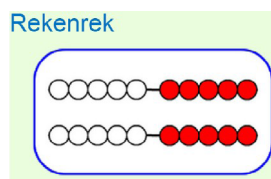
- Rekenrek Learning Tool
- Number Cards

Activity 3:

- Set Learning Tool
- Number Cards

Activity 4:

- Catch a Bouncing Ball Game – Whole Number Operations





Addition to 10

One More, Two More Tiles

Activity 1


Set Up for the Activity:

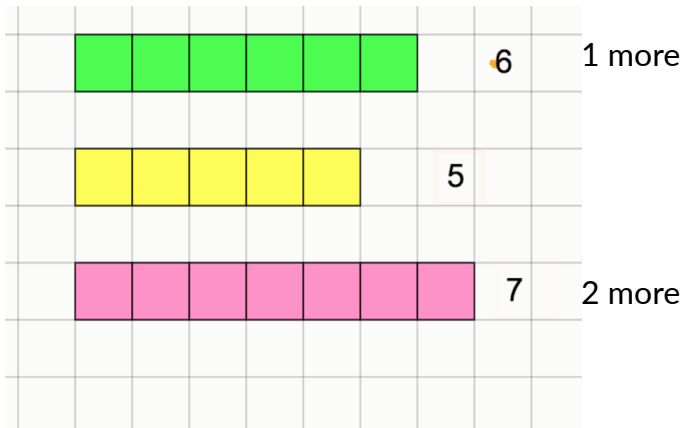
- Open the Colour Tiles learning tool.
- Shuffle one set of number cards 0 to 8 and place them face down in a pile.

How to Do the Activity:

1. Have your child pick a card and place that many same coloured tiles in a row on the workspace.
2. Ask your child to use another colour and make a row of tiles that is one more than the original number. Place this row above the row from step 1.
3. Ask your child to use another colour and make a row of tiles that is two more than the original number. Place this row below the row from step 1.
4. Use the annotation tool to record the number of tiles in each row.
5. Have your child check the numbers using the tile count .
6. Repeat activity as desired.

Example:

 5 colour tiles (row 2)



Your child may first count out five and then count 1 to add one more and count 1, 2 to add two more.

Let's Talk About It

Which row shows one more? How do you know?
Which row shows two more? How do you know?



Addition to 10

How Many Beads?

Activity 2

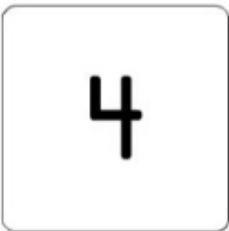
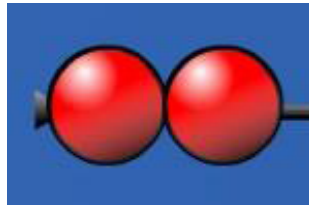
Set Up for the Activity:

- Open the Rekenrek learning tool.
- Shuffle together two sets of number cards 1 to 5 (total of 10 cards) and place them face down in a pile.

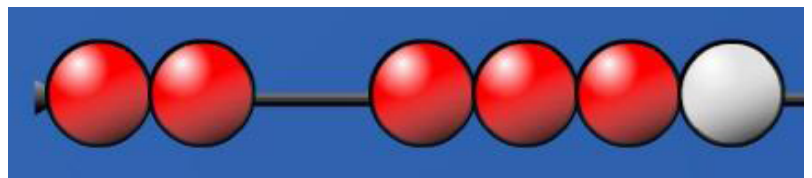
How to Do the Activity:

1. Have your child pick a number card.
2. Ask your child to show this number of beads on the left side of a Rekenrek rack.
3. Have your child pick a second card.
4. Ask your child to add this number of beads onto the beads in step 2.
5. Ask your child how many beads are there altogether.
6. Ask your child if the result will be the same if the order of the cards were reversed.
7. Check the prediction.
8. Repeat activity as desired.

Example:



4 beads added on



6 beads altogether

Your child may count all the beads to find the total.

Let's Talk About It

If we add one more bead, what is the total?
If we add two more beads, what is the total?



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How Many Objects in the Set?

Activity 3

Set Up for the Activity:

- Open the Set learning tool.
 - » ensure you are in the Create Mode
 - » place two 10-frames in the workspace
- Shuffle one set of red number cards 1 to 5 and place them face down in a pile.
- Shuffle one set of black number cards 1 to 5 and place them face down in a pile.

How to Do the Activity:

1. Have your child pick a red card and move that many objects onto the top row of a 10-frame.
2. Have your child pick a black card and move that many objects onto the bottom row of the 10-frame from step 1.
3. Ask your child to determine the total number of objects on that 10-frame.
4. Have your child check the total using the object count.
5. Using a second 10-frame, have your child place the number of objects indicated by the red card on the bottom row and place the number of objects indicated by the black card on the top row.
6. Ask your child to compare the amount of objects on the two 10-frames.
7. Repeat activity as desired.

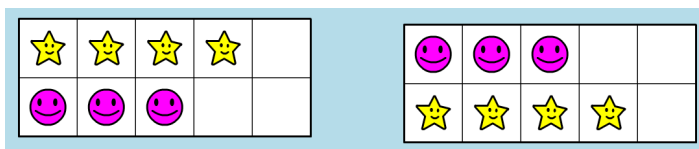
Example:



4 stars



3 happy faces



Your child may notice that both representations have 3 empty spaces to make up 10.

Let's Talk About It

How many objects would you need to add to the 10-frame to make 10? How do you know?
Does it matter which order we combine the numbers?



Addition to 10

Catch a Bouncing Ball - Operations

Activity 4

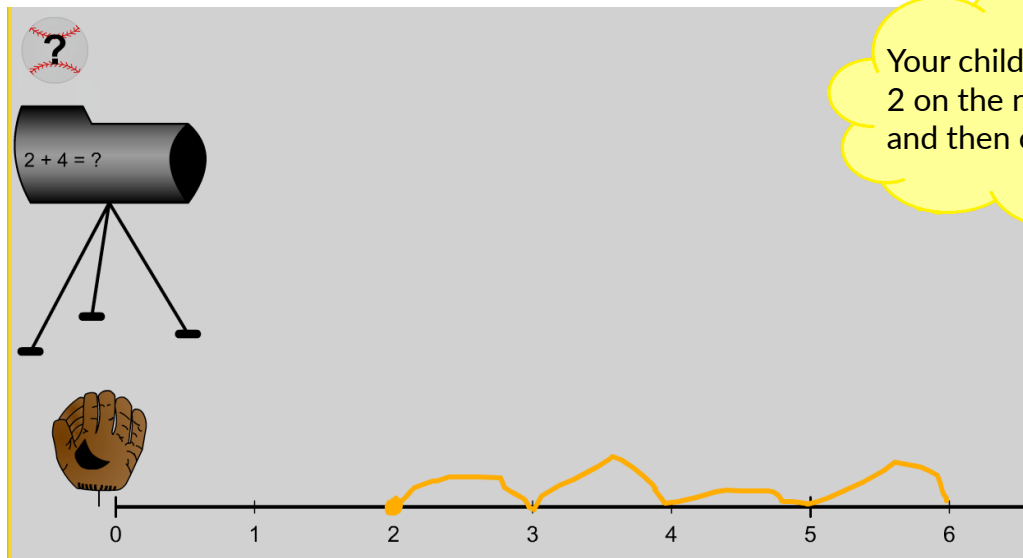
Set Up for the Game:

- Open the Catch a Bouncing Ball - Whole Number Operations game
 - » Choose Addition
 - » Choose Sums to 10
 - » Select Play

How to Play the Game:

1. An addition expression will appear on the baseball.
2. Move the baseball glove to the location on the number line that represents the sum of the expression.
3. If the location is correct a new expression will appear. If the location is incorrect try to find the correct sum 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:



Let's Talk About It

How did you find the sum of the numbers?
What is another way you can determine the sum?