



# Counting Backwards from 100

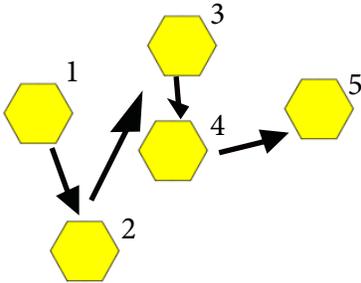
## Mathematical Ideas

It is important for children to count forward and backwards from a variety of starting points. This will help them to understand the size of the number in relation to other numbers.

When counting, the number words are always said in the same order.

One, two, three, four,... not four, two, one, three

Counting can begin with any item in a set. Each item must be counted only once (one to one correspondence). The quantity will always be the same for that set.



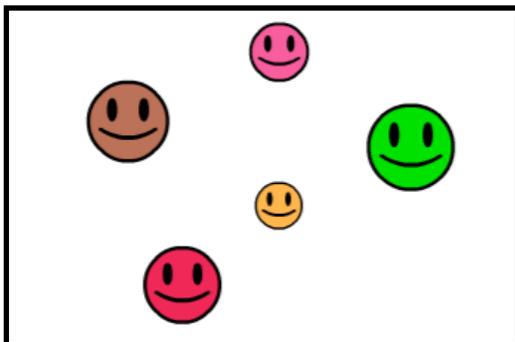
As you count forwards, the quantity increases.

As you count backwards, the quantity decreases.

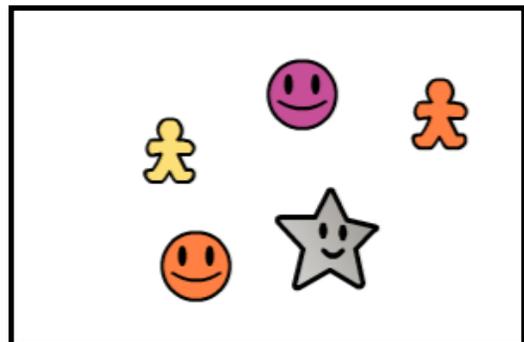
The last counting word tells us how many are in the set.

“There are five pattern blocks in this set.”

Quantity is related to ‘how many’ rather than size, shape, or position. The quantity of a set stays the same even if the appearance of the set changes.



Set of 5 Objects



Set of 5 Objects



# Counting Backwards from 100

## Tips

- Learning tools are used to explore mathematical ideas and are a way for children to share their thinking. Encourage your child to take the time to use the learning tools in each activity.
- Children are encouraged to move or touch the items while counting so they learn to count each item only once.
- Encourage your child to state what is being counted (e.g., 10, 20, 30 rods, not just 10, 20, 30)
- Tallies can help with tracking the count. Tally marks are set in groups of 5.



This tally count is 12.

- Organizing objects into groups of 2s, 5s, and 10s allows your child to count more efficiently.

## Helpful Information

### Mathematical Words/Symbols

*Counting on* – is counting up from a numeric amount that you are given. For example, if you have 3 coins and you would like to count on another 4 coins, you can count “three, four, five, six, seven.” When people count on they usually say the number they are counting from and then the other numbers.

*Counting back* – is counting back from a numeric amount that you are given. For example, if you have 10 coins and you would like to count back 4 coins, you can count “ten, nine, eight, seven, six.” When people count back they usually say the number they are counting from and then the other numbers.

*Digits* – are the numerals 0 to 9 that form numbers. For example, the digits 2 and 7 can form the two-digit numbers 27 and 72.

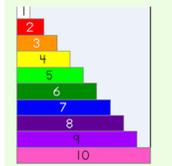
*Skip counting* – usually means counting forwards or backwards by numbers other than 1, such as by twos (2, 4, 6, 8); by fives (20, 15, 10, 5); or by tens (40, 50, 60, 70).

### Materials

#### Activity 1 and 2 :

- Whole Number Rods

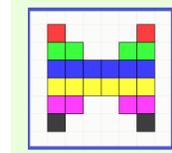
Whole Number Rods



#### Activity 3:

- Colour Tiles

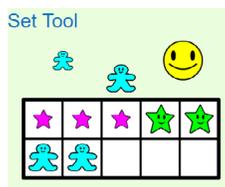
Colour Tiles



#### Activity 4:

- Set

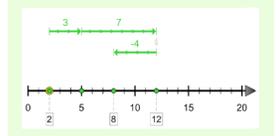
Set Tool



#### Activity 5:

- Number Line

Number Line



#### Activity 6:

- Money

Money



Learning Tools and Games can be accessed at [mathies.ca](http://mathies.ca)



# Counting Backwards from 100

## Counting Backwards Using Whole Number Rods

## Activity 1

### Set Up for the Activity:

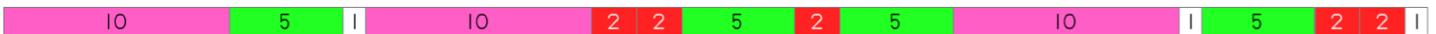
- Open the Whole Number Rods learning tool.
  - » Place whole number rods end to end to form a train or trains in the workspace. Use a mixture of 1-rods, 2-rods, 5-rods, and 10-rods such that the sum of the rods is between 50 and 100.
- Shuffle one set of number cards 2 to 6 and place them face down in a pile.

### How to Do the Activity:

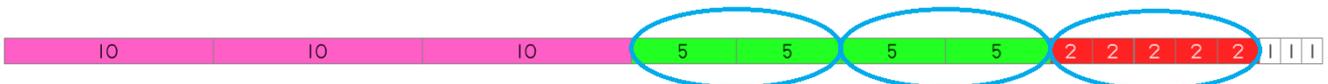
1. Show your child the train and ask what the combined value of the rods.
2. Have your child pick a card from the pile. The number on the card represents the number of tens to be removed.
3. As your child removes the tens, have your child count backwards by tens out loud. Record what is said.
4. Share your record with your child. Have your child check the count.
5. Repeat activity as desired.

### Example:

Starting train:



Your child may rearrange and count the rods by 10s.



This train has a value of 63.

Count: 10, 20, 30, 40, 50, 60, 63  
 This train has a value of 63.

5

5 tens to be removed    Count: 63, 53, 43, 33, 23, 13



The new train has a value of 13.

### Let's Talk About It

How can you count backwards by tens when you have 2 rods and 5 rods? Is there another way?

How can you use the unit train on the workspace to help you count and check?



# Counting Backwards from 100

## Counting Backwards Using Colour Tiles

## Activity 2

### Set Up for the Game:

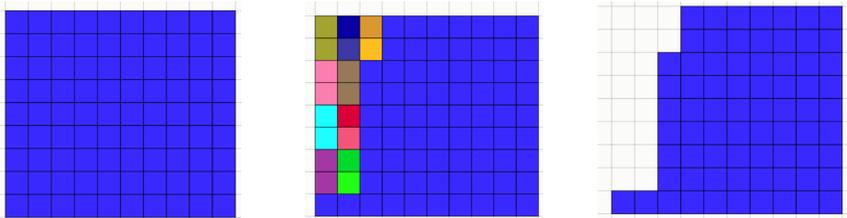
- Open the Colour Tiles learning tool.
  - » Select regular six.
  - » Place an even number between 50 and 100 of the same colour tiles on the workspace.

### How to Play the Game:

1. Ask your child to count the tiles. Check the total using the counter icon .
2. Tell your child that the task is to skip count backwards by 2's nine times from the starting number.
3. Have your child change 9 pairs of tiles to a different colour.
4. Select the pair of squares (tap both to highlight them)
5. Use the colour palette icon  and select a new colour
6. Be sure to unselect the pair of tiles before changing the next pair.
7. Ask your child to remove each pair of tiles and place them in the recycling bin. As each pair of tiles are removed have your child count backwards from the original number by twos.
8. When your child has finished counting backwards, confirm the final count with the total given by the counter icon.
9. Repeat activity starting with 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, or 100 of the same colour tiles on the workspace. This time, have your child change the colour of five to nine sets of 5 tiles. Have your child count backwards by 5s.
10. Repeat activity starting with 50 to 100 tiles on the workspace. This time, have your child change the colour of six to nine sets of 10 tiles. Have your child count backwards from the original number by 10s.

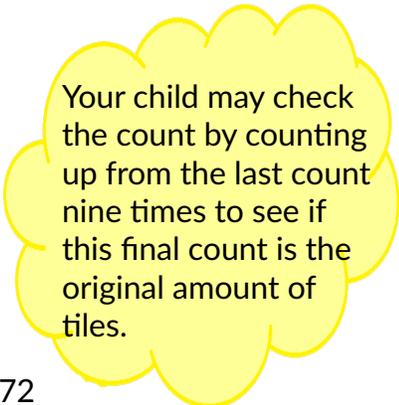
### Example:

Count: 10, 20, 30, 40, 50, 60, 70, 80, 90 tiles



9 sets of pairs with a different colour

Counting backwards from 90 by 2s: 88, 86, 84, 82, 80, 78, 76, 74, 72



### Let's Talk About It

Why is counting backwards a good skill to have?  
 Is it hard or easy to count backwards by twos or fives?



# Counting Backwards from 100

## Skip Counting Backwards Using the Set Tool

### Activity 3

#### Set Up for the Activity:

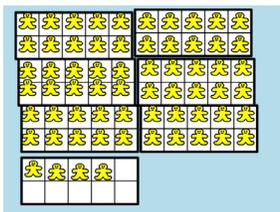
- Open the Set learning tool.
  - » Work in Create mode.
  - » Place 50 to 100 objects on the workspace such that you have an even number of them. All the objects should be the same size, shape and colour. You may wish to use the multiplier tool to help you do this quickly.

#### How to Do the Activity:

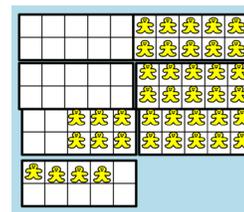
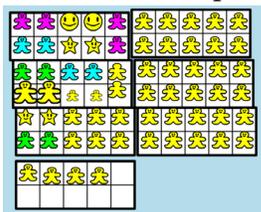
1. Ask your child to count the objects. Check the total using the counter icon
2. Tell your child that the task is to skip count backwards (12 times) by 2s from the starting number.
3. Have your child change one attribute of a pair of objects, then change an attribute of a second pair until there are twelve pairs that are each different from the original sets.
4. Select the pair of objects (tap both to highlight them) and then select a new attribute. Be sure to unselect them before changing the next pair.
5. Ask your child to remove each pair of objects and place them in the recycling bin. As each pair of objects are removed have your child count backwards from the original number of objects by twos.
6. When your child has finished counting backwards, confirm the final count with the total counter icon.
7. Repeat activity starting with 50, 55, 60, 65, 70, 75, 80, 85, 90, 95 or 100 objects on the workspace. This time, have your child change the colour of six to nine sets of 5 objects. Have your child count backwards from the original number by 5s.
8. Repeat activity starting with 50 to 100 objects on the workspace. This time, have your child change the colour of six to nine sets of 10 objects. Have your child count backwards from the original number by 10s.

#### Example:

Change one attribute of 12 pairs of objects.



There are 64 objects.



Counting backwards from 64 by 2s:  
62, 60, 58, 56, 54, 52, 50, 48, 46, 44,  
42, 40 objects

Your child may check the count by counting up from the last count twelve times to see if this final count is the original amount of objects.

#### Let's Talk About It

- Why is counting backwards a good skill to have?
- Is it hard or easy to count backwards by twos? Why? How can you get better at it?
- How many objects did you put in the recycling bin?
- Why did it help to change the pairs so they look different?



# Counting Backwards from 100

## Counting Backwards by 10s from 100 Using a Number Line

### Activity 4

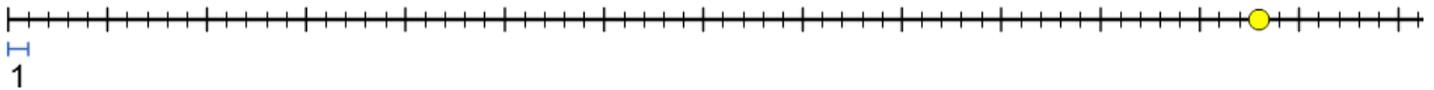
#### Set Up for the Game:

- Open the Number Line learning tool.
  - » Select 0 to 100.
  - » Use the number line style  selector to change the number line style to a number ribbon. .
  - » Use the label  selector to remove number line numbers. .
  - » Put a point on one of the hash marks between 50 and 100 on the number line by clicking on that hash mark.

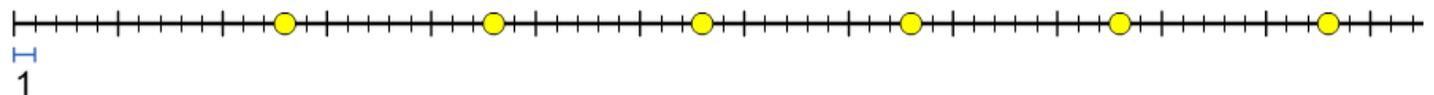
#### How to Play the Game:

1. Ask your child to count the number of spaces between the hash marks on the number line from 0 (the left end) up to your point.
2. Have your child use a number ribbon to draw a ribbon from 0 to your point.
3. Ask your child to count the sections on the ribbon. Point out that the number above the ribbon matches both counts.
4. Ask your child to place a point every ten back from the original point.
5. Ask your child to count back by 10s, five to nine times. Have them record the count by each point.
6. Have your child drag the number ribbon back towards the left to check the count with the number on the ribbon.

#### Example:



Count: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 63 spaces to the point



Counting backwards from 63: 53, 43, 33, 23, 13

#### Let's Talk About It

How do you know you counted all the spaces?

What strategy did you use to put the points on the number line?

How would you count change if the original number was one more? Two more?



# Counting Backwards from 100

## Counting Backwards Using Money

## Activity 5

### Set Up for the Activity:

- Open the Money learning tool.
  - » Place 5 to 10 ten dollar bills onto the workspace.

### How to Do the Activity:

1. Ask your child to count how many dollars are in the workspace.
2. Tell your child that the task is to skip count backwards (six times) by 2s from the starting number.
3. Have your child trade the ten dollar bills with enough toonies to remove.
4. Ask your child to remove each toonie and place in the recycling bin. As each toonie is removed have your child count backwards from the original number of dollars by twos.
5. When your child has finished counting backwards, confirm the final count.
6. Repeat activity trading the ten dollar bills with enough five dollar bills to remove. This time, have your child count backwards from the original number by 5s, six times.
7. Repeat activity starting with a mixture of loonies, toonies, five and ten dollar bills. This time, have your child arrange the money into groups of as many ten dollars as possible. Have your child count backwards from the original number by 10s, six times.

### Example:



Count: 10, 20, 30, 40, 50, 60, 70



trading in for toonies



Counting backwards from 70: 68, 66, 64, 62, 60, 58

Your child may check the count by counting up from the last count six times to see if this final count is the original amount of money.

### Let's Talk About It

What patterns in your count do you notice when you count backwards by twos?  
What patterns in your count do you notice when you count backwards by fives?  
What patterns in your count do you notice when you count backwards by tens?