



Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics)

Catherine Twomey Fosnot

[Download now](#)

[Click here](#) if your download doesn't start automatically

Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics)

Catherine Twomey Fosnot

Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics)

Catherine Twomey Fosnot

Ages and Timelines: Subtraction on the Open Number Line is one of eight units in the *Contexts for Learning Mathematics' Investigating Number Sense, Addition, and Subtraction* (K - 3)

This unit begins with the story of Carlos, an eight-year-old boy who is fascinated by his great-grandfather's thick, beautiful silver hair. His great-grandfather lives in Puerto Rico and Carlos is preparing to meet him for the first time. Having only seen photos of him as a much younger man, Carlos wonders how old his great-grandfather is and how many years it will take before he might have hair like that, too. As Carlos begins to investigate these questions, his whole family becomes involved in exploring age differences and figuring out how old they each were when Carlos was born. When Carlos shares his investigation with his teacher, the whole school gets involved in the project.

This story context sets the stage for a series of investigations in this unit. Children interview their family members and compare age differences. Timelines are introduced as a context for using the open number line - a helpful model used as a tool to explore and represent strategies for addition and subtraction. This unit will focus on the open number line as a model for subtraction.

In contrast to a number line with counting numbers written below, an “open” number line is just an empty line used to record children's addition and subtraction strategies. Only the numbers that children use are recorded and the addition and subtraction are recorded as leaps or jumps. For example, if a child's strategy for adding $8 + 79$ is $79 + 1 + 7$, using a landmark number of 80, it would be recorded on the open number line

The recording would be similar if a child solves $87 - 8$ by first removing 7 and then 1. Modeling children's thinking on the open number line helps them move beyond counting one by one for addition and subtraction, to strategies such as taking leaps of ten, decomposing, and/or using landmark numbers. Use of the open number line also encourages discussion of the relationship between addition and subtraction and of the relationship between various problems in which the operation of subtraction can be employed - such as removal, comparative difference, and finding a missing addend.

As the unit progresses, timelines are used to record years of birth, rather than ages. This change in context challenges learners to grapple with larger numbers and with the changing places of the part-whole relations of numbers on the number line. For example, first the number 79 may be marked on the number line as 8 less than 87; then it may be the difference between 2005 and 1926. Several minilessons for subtraction are also included in the unit. These are structured using strings of related problems as a way to guide learners more explicitly toward computational fluency with subtraction.

Note: It is expected that children will have had substantial experience with number lines prior to this unit. If this is not the case, you might want to take a look at the unit *Measuring for the Art Show*, to see how the number line model can be developed.

To learn more visit <http://www.contextsforlearning.com>

 [Download Ages and Timelines: Subtraction on the Open Number ...pdf](#)

 [Read Online Ages and Timelines: Subtraction on the Open Numb ...pdf](#)

Download and Read Free Online Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) Catherine Twomey Fosnot

From reader reviews:

Sylvia Dozier:

As people who live in typically the modest era should be revise about what going on or info even knowledge to make them keep up with the era which can be always change and move forward. Some of you maybe will certainly update themselves by studying books. It is a good choice for yourself but the problems coming to you actually is you don't know which one you should start with. This Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) is our recommendation to help you keep up with the world. Why, since this book serves what you want and wish in this era.

Robert Knight:

This book untitled Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) to be one of several books that will best seller in this year, this is because when you read this e-book you can get a lot of benefit upon it. You will easily to buy this kind of book in the book store or you can order it through online. The publisher of this book sells the e-book too. It makes you more easily to read this book, since you can read this book in your Cell phone. So there is no reason for you to past this e-book from your list.

Russell Howell:

People live in this new day time of lifestyle always aim to and must have the spare time or they will get large amount of stress from both lifestyle and work. So , whenever we ask do people have time, we will say absolutely of course. People is human not just a robot. Then we request again, what kind of activity do you possess when the spare time coming to you of course your answer will unlimited right. Then do you try this one, reading ebooks. It can be your alternative with spending your spare time, the actual book you have read is Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics).

Corey Cook:

Some individuals said that they feel bored stiff when they reading a guide. They are directly felt this when they get a half parts of the book. You can choose the actual book Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) to make your own personal reading is interesting. Your own personal skill of reading talent is developing when you like reading. Try to choose basic book to make you enjoy to read it and mingle the sensation about book and studying especially. It is to be first opinion for you to like to wide open a book and study it. Beside that the guide Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) can to be your brand new friend when you're truly feel alone and confuse in doing what must you're doing of the time.

Download and Read Online Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) Catherine Twomey Fosnot #AMGN8JKZXVP

Read Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) by Catherine Twomey Fosnot for online ebook

Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) by Catherine Twomey Fosnot Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) by Catherine Twomey Fosnot books to read online.

Online Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) by Catherine Twomey Fosnot ebook PDF download

Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) by Catherine Twomey Fosnot Doc

Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) by Catherine Twomey Fosnot Mobipocket

Ages and Timelines: Subtraction on the Open Number Line (Contexts for Learning Mathematics) by Catherine Twomey Fosnot EPub