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TI-nspire™

Grade level: 9-12
Subject: Algebra I
Time required: 60-120 minutes

Multiplying Polynomials

by – Dennis Ivany

Activity overview

A slightly different way to look at multiplying polynomials by looking at multiplication of numbers.

Concepts

Multiplying Numbers
Multiplying Binomials
Multiplying a Binomial by a Polynomial
Multiplying Polynomials

Teacher preparation

Load the activity **NumberSense_ChineseDecimals_Ivany.tns** *on each TI Nspire..*

Classroom management tips

It may help to work through the first example or two with students to ensure they know how to insert text on a Graphs and Geometry page.

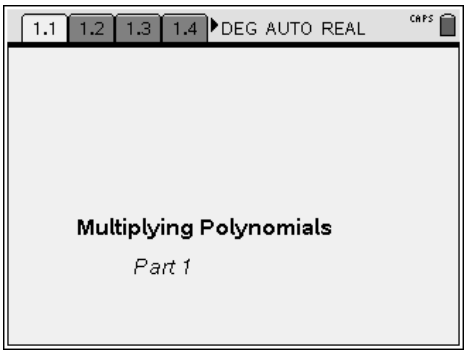
TI-Nspire Applications

Graphs and Geometry

Step-by-step directions

Open the document

algebra_MultiplyingPolynomials_Ivany.tns

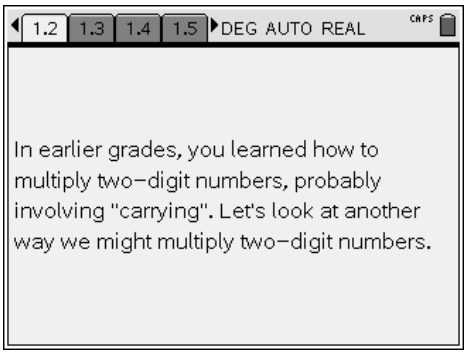


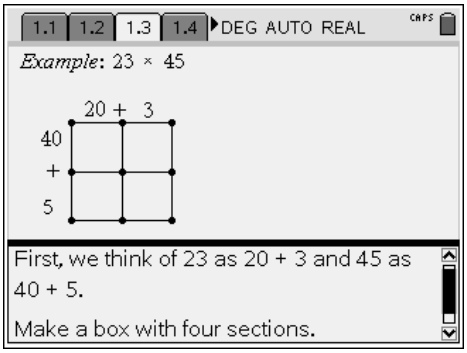
Follow the instructions in the slides.

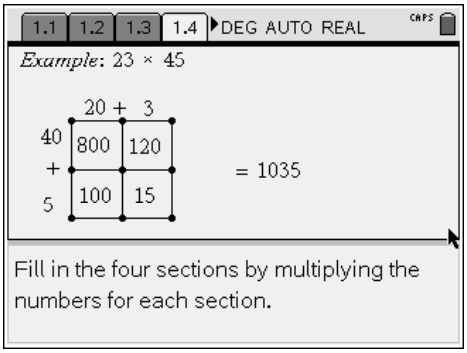
Use ctrl ▶ to move to the next slide in the document.

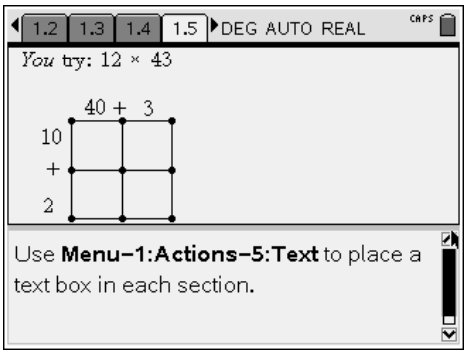
Use ctrl tab to move between applications on the same slide.

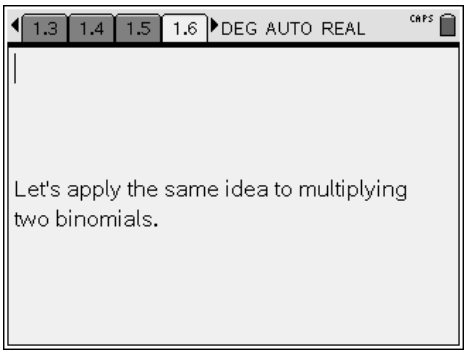
Setting up the problem.



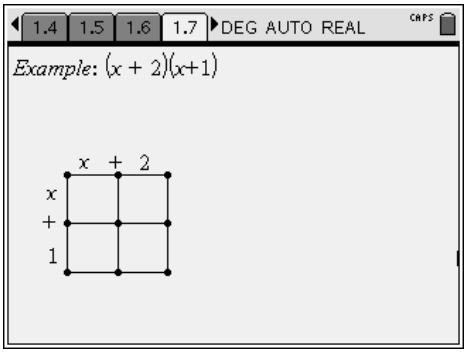


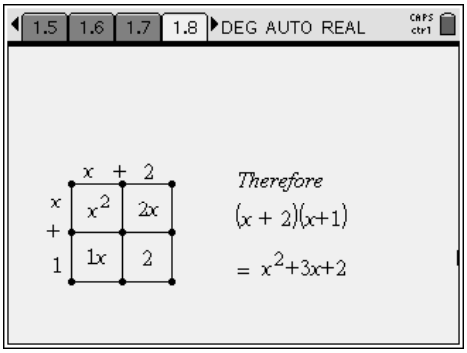




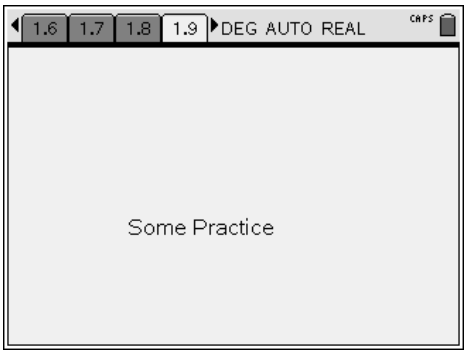


The solution is on the next slide.



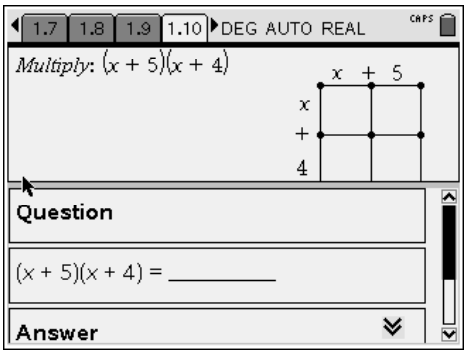


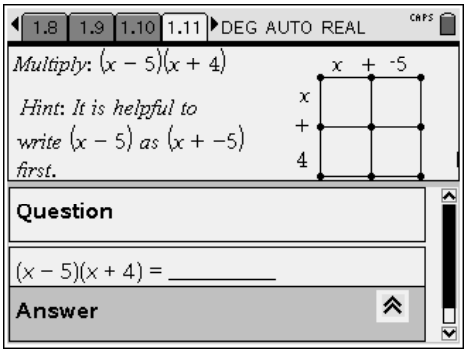
Time to give it a whirl yourself.

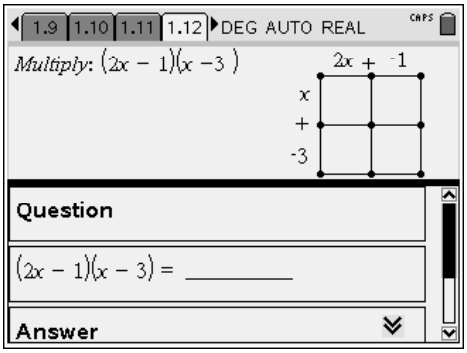


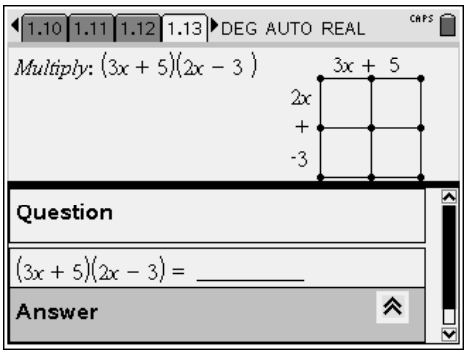
Type your answer in the blank space after you have completed the problem using the box.

Press tab ≈ enter to see the answer provided.

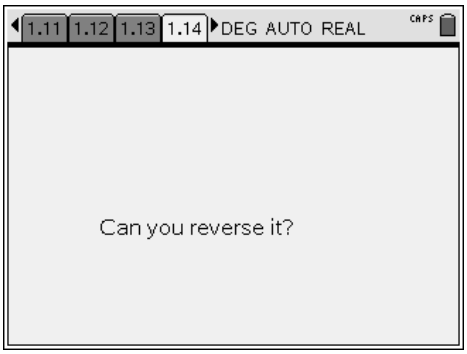




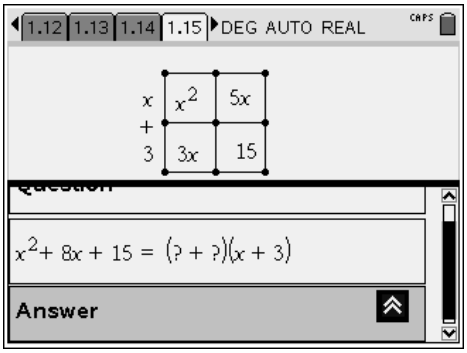


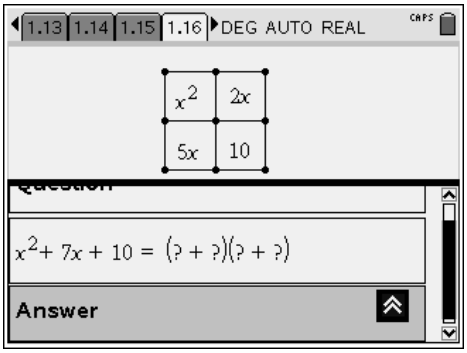


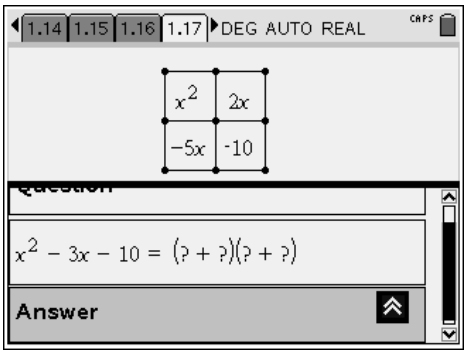
Reversing the procedure.

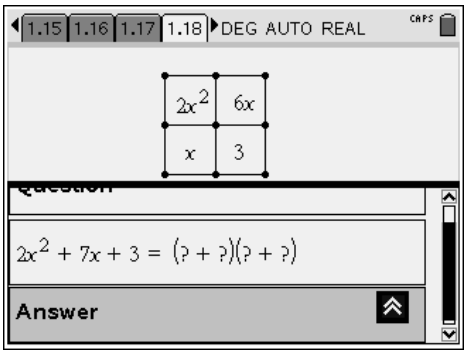


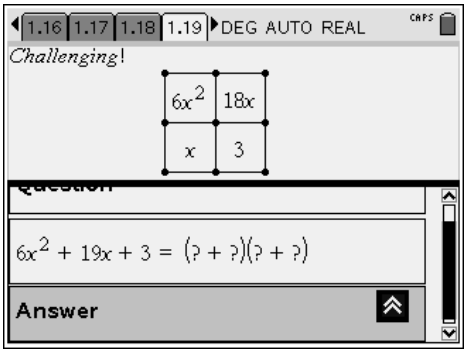
On the next few slides, see if you can figure out the binomials that were multiplied to give the trinomial.



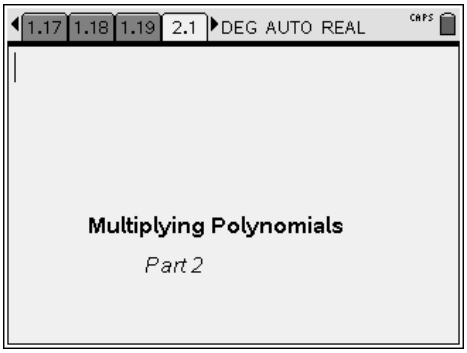




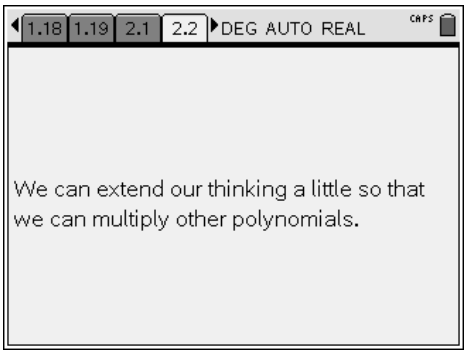


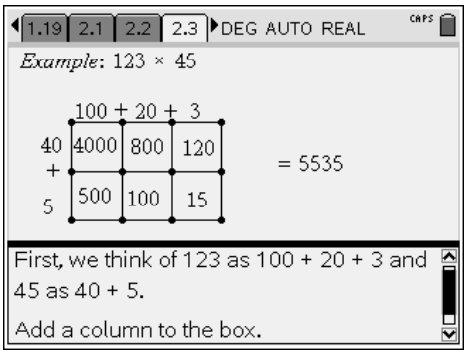


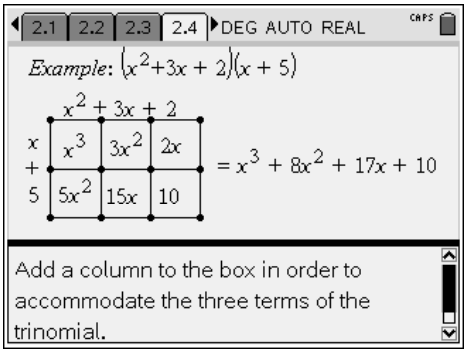
Move to Problem 2 on the Nspire.



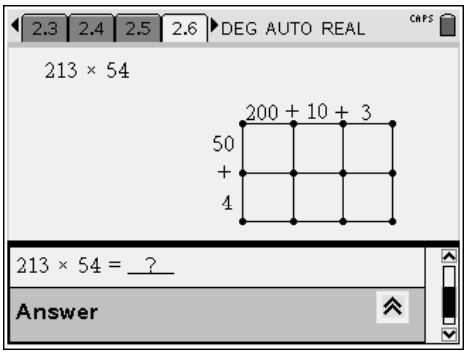
Follow the activity on the slides.

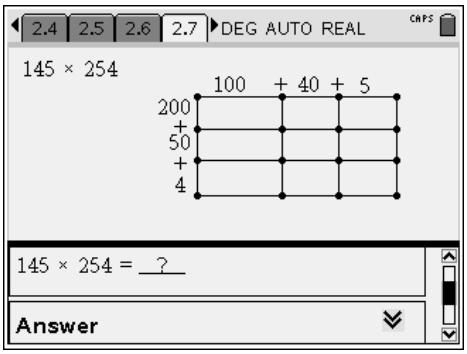


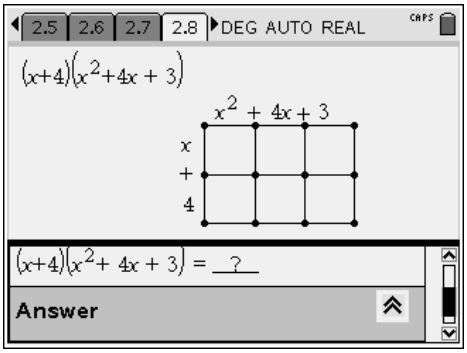


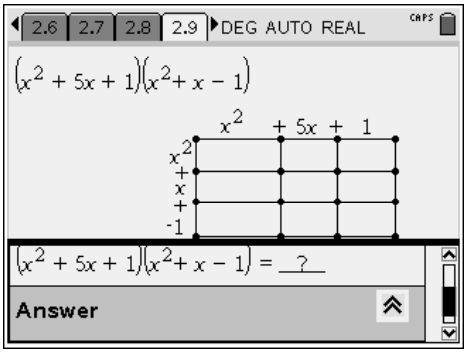


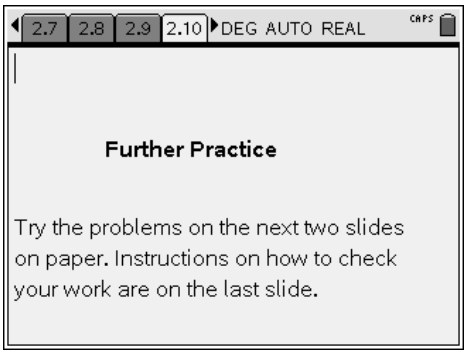
Time to practice.

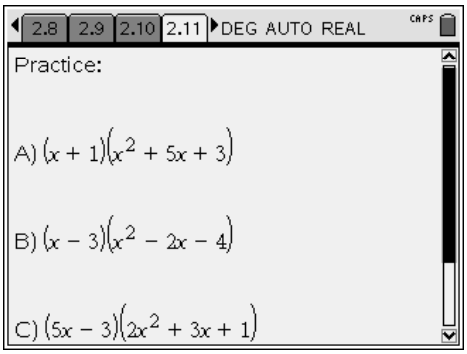


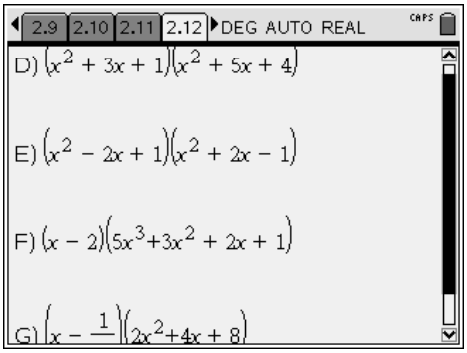

2.4 2.5 2.6 2.7 DEG AUTO REAL
145 × 254
100 + 40 + 5
200
+
50
+
4
145 × 254 = ?
Answer

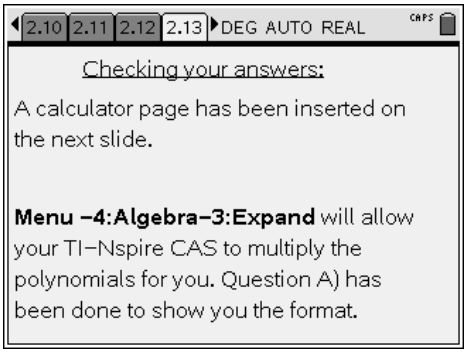

2.5 2.6 2.7 2.8 DEG AUTO REAL
(x+4)(x²+4x + 3)
x² + 4x + 3
x
+
4
(x+4)(x²+ 4x + 3) = ?
Answer

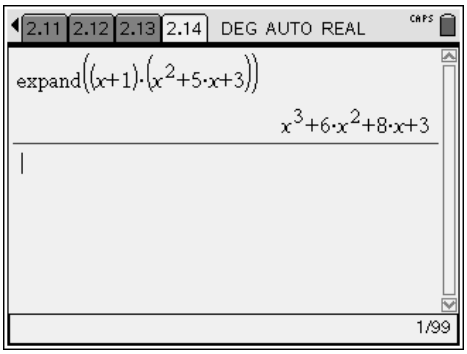

2.6 2.7 2.8 2.9 DEG AUTO REAL
(x² + 5x + 1)(x²+ x − 1)
x² + 5x + 1
x²
+
x
+
-1
(x² + 5x + 1)(x²+ x − 1) = ?
Answer


2.7 2.8 2.9 2.10 DEG AUTO REAL
Further Practice
Try the problems on the next two slides on paper. Instructions on how to check your work are on the last slide.









Assessment and evaluation

Journal -	Have students write about how they can tell the number of terms in the product of two polynomials.
Assignment -	Provide practice sheets with 8 to 10 more exercises for students to try.
Student self-assessment -	For those who struggle initially, have them record the number of problems they correctly complete each day using a broken line graph.