

CD3: Division Exploded

Installation

Insert the CD (assume d). Once up to speed choose Start, Run, type d:\setup.exe and hit the ENTER key. It's best to accept the default directory because the delete program only works in there.

“Eternity is a very long time, especially near the end”

Do this to save time

Run the program and choose 'Enter'. Use the keyboard or mouse to enter 67/5. Leave the answer blank. Choose 'Okay' to move on. The program starts in **Chunking** mode. Help is top right, the 5x multiplication table is on the left and the mode menu is at the top.

Choose 1x5 in the table. Move the mouse over the 1x5 in the calculation and click it to deduct. Deduct 10x5 in the same way. Drag one deduction onto the other to combine them. Now drag the 1 in 11x5 to separate them. Drop it onto another line. The aim is to arrange the chunks to match the final answer.

Choose **Standard Written** mode from the menu. This is similar to Chunking mode but you can only proceed if you select the biggest chunk. Try to subtract 1x5 and you can't, but try 10x5 and you can. When you know how to choose the biggest chunks, practice here to get ready for the test ('Choose' option on the start menu).

Choose **Arrays**. Only the last line of the calculation is shown, and an array of 5's. Select 3x5 on the table and left-drag the yellow 5's in the array and drop them into the answer. You can right-click the array to change the selection. Exit bottom left and try some bigger numbers. You can drag numbers back down from the answer.

Enter 34/5, return to here and change to **Number Line** mode. Select 1x5 and while selected view help item 3. Click the 5 over the leap to confirm it. Repeat this to deduct another 5.

We've shared 10 of 34, into 2 groups of 5. For answers up to 25 (divisors to 10) you can see shared objects by clicking the billiard balls and 'Shared'. With 'My Share' on, each group has a green one for **you**. With 'All shares', one person gets green, one blue, etc. To see all objects, including those not yet shared, click 'On'.

Click elsewhere to hide the menu. You can switch back and forth to arrays. The big green arrow changes the direction of travel.

Enter 26/5 with an answer of 4. Above, you can see $20=5 \times 4$. Move the mouse to the help sign (top left). We have divided 20 to give 5×4 , but 26 are available. Change the 4 to a 5. Try help again and then set the remainder to 1. The answer is ticked.

Enter 1234/5 and change to **Multiples** to find multiples of 5 in 1234. Select 5 or 50 in the table. **Right**-click 1234 to repeat a deduction. Deduct 5's, move them to another line and count them as you go.

Okay, we can find the 5's in 1234, but how can we do it efficiently? How do we find the hundreds, tens and units in the answer? Divide 1234 into 5's and the answer is 246×5 . Let's find the two hundred 5's, and forty 5's...

Q. How many hundred 5's in 1234?

Well, for every hundred 5's we need 500. So, how many 500's are there in 1200 (ignore 34)? Notice the 5 and 12 and ignore the 0's.

Look at help item 5. The 5 is below the 12. Look at help 6, think 100's and target the 12. How many 5's in 12? Click 2×5 , click $\times 100$, move to 1234 and drag 200×5 to another line, leaving 234.

Q. How many 5's in 234?

Well, for every ten 5's we need 50. So, how many 50's are there in 230 (ignore 4)? Look at help 5 and 6. Ignore the 0's. How many 5's in 23? Click 4×5 , click $\times 10$ and deduct. Etc.

Restart, drag 4 away from 1234 and separate 246×5 into its parts.

Choose Option

Worksheets a to j are drawn from the text file chunk.txt. Highlight an exercise and choose Start. You can enter the answer or complete it later. In the calculation, watch the click count top-right to see how many you have left. Records are kept for two attempts.

User Records

To set up for a user, click bottom left on the main menu to go to the load/save menu. Choose Save Record, enter their password and save to their file. Reset for the next user. If you have written a special worksheet for users, load it before saving the records.

Double Password: control followed by: teacher123

Enter passwords when Loading Records if you want to see the users' scores. Use the second password in the delete program.