

In the *Arithmetic* sim, students will practice multiplying, dividing and factoring by using a multiplication table. Each screen (Multiply, Factor, Divide) opens with a level selection that allows you to choose your level. The “back” arrow on the upper left returns the user to the level selection.

CHOOSE to multiply, factor, or divide.

? x ? = 20
or divide.
2 x ? = 6

SELECT more difficult levels with larger multiplication tables.

REWARD users get +1 point for each answer correct on the first try!

Suggestions for Use

Sample Challenge Prompts

- Why can two numbers be multiplied in either order?
- Which numbers form a purple square on the arithmetic board?
- After you complete a board, what patterns do you notice? Are the patterns similar or different for boards on different levels?
- On the multiply screen, how can you use the purple squares to help you answer a multiplication problem?
- On the division screen, there is no division sign! How is this a division problem? Re-write one of the problems as a division statement.

Insights into Student Use

Students may not immediately notice the connection between the answer in each cell and the number of cells in the displayed purple shaded area. In addition, the division screen is framed in the form of “what number do you have to multiply the first number by to get the product?” which may be a slightly different context than they have seen division before. However, this multiplicative approach to division can be very powerful for increasing the student’s conceptual understanding.

See all activities for Arithmetic [here](#).

For more tips on using PhET sims with your students, see [Tips for Using PhET](#).