

Game Screen

Test your understanding of the area model by finding missing partial products, dimensions, or total area.

Level 1: Find 1 partial product or total area

Level 2: Find 2 partial products or 1 partial product and total area

Level 3: Find 2 partial dimensions or 1 partial dimension and 1 partial product

Level 4: Find 2 partial dimensions or 1 partial dimension and 1 partial product

Level 5: Find factors of single x double or single x triple digit problems

Level 6: Find factors of double x double digit problems

VIEW status of the game level

FIND missing information stated

START OVER to reset progress

SUBMIT answers using the edit buttons

Design Notes

- On the Explore screen, the area rectangle drag handle is useful for initial exploration, and the number spinners are useful for more precise configurations.
- On the Explore screen, multiplying numbers less than 10 in the 100x100 grid will result in very small areas displayed on the area grid.
- Multiplication of 5×7 will not lead to as rich of a discussion as 15×7 or 15×17 . Encourage students to justify why partitioning dimensions larger than 10 is useful, and describe a useful partition strategy.

Suggestions for Use

Sample Challenge Prompts

- Look at each line of the calculation. Where is that represented in the area model?
- Given a total area, find the dimensions. Can you find other dimensions that produce the same total area?

See all published activities for Area Model Multiplication [here](#).

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