

Luna's Space Adventure

Grade 5 • Decimal area models • 5.3D

Name _____

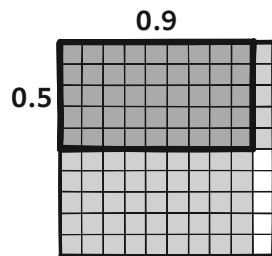
Date _____



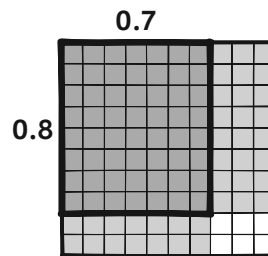
Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Read the model

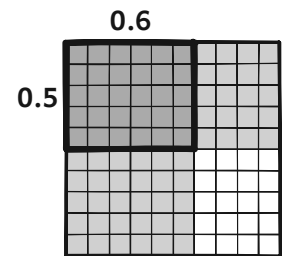
Count the squares shaded twice, where the columns and rows cross: each is one hundredth.



$0.9 \times 0.5 = \boxed{}$



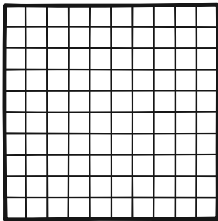
$0.7 \times 0.8 = \boxed{}$



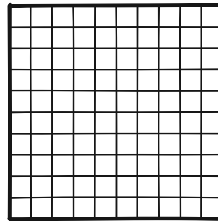
$0.6 \times 0.5 = \boxed{}$

Draw the model

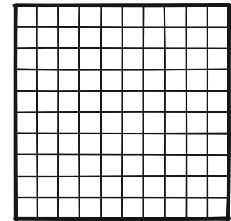
Shade the first factor in columns and the second in rows. Count where they cross.



$0.4 \times 0.7 = \boxed{}$



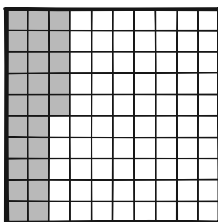
$0.5 \times 0.9 = \boxed{}$



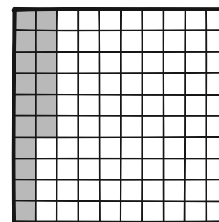
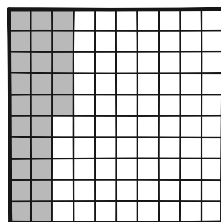
$0.2 \times 0.9 = \boxed{}$

Groups of a decimal

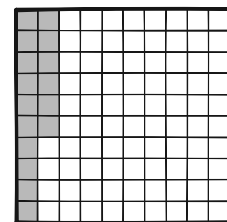
Each grid is one group. Add up the shaded squares.



$2 \times 0.25 = \boxed{}$



$2 \times 0.16 = \boxed{}$



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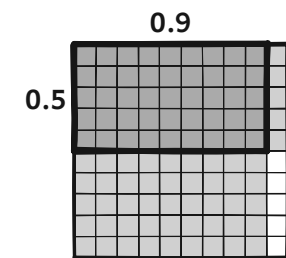
ANSWER KEY



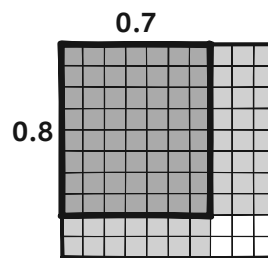
Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Read the model

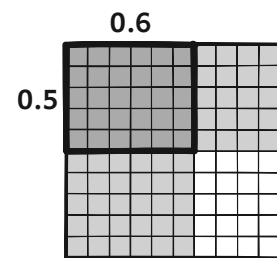
Count the squares shaded twice, where the columns and rows cross: each is one hundredth.



$$0.9 \times 0.5 = 0.45$$



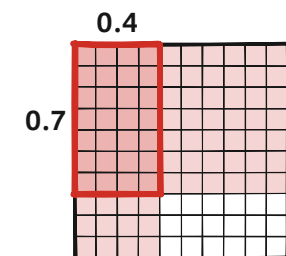
$$0.7 \times 0.8 = 0.56$$



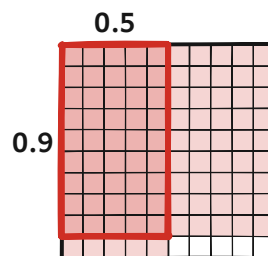
$$0.6 \times 0.5 = 0.3$$

Draw the model

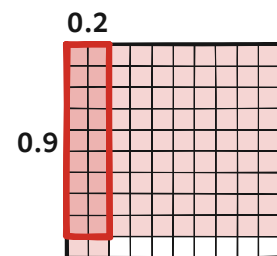
Shade the first factor in columns and the second in rows. Count where they cross.



$$0.4 \times 0.7 = 0.28$$

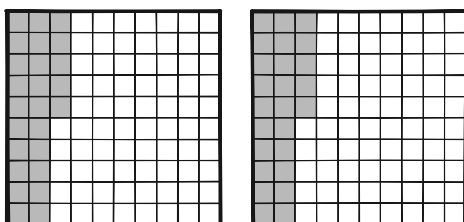


$$0.5 \times 0.9 = 0.45$$

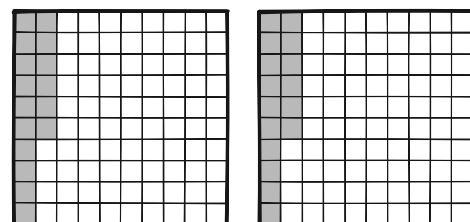


$$0.2 \times 0.9 = 0.18$$

Groups of a decimal Each grid is one group. Add up the shaded squares.



$$2 \times 0.25 = 0.5$$



$$2 \times 0.16 = 0.32$$



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GUIDE

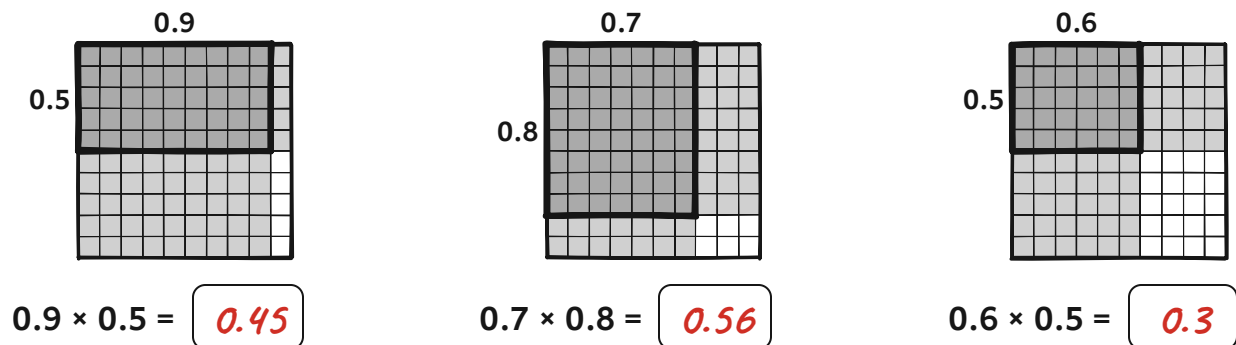
1 What this sheet practises

Multiplying tenths by tenths with area models on a hundredths grid, a whole number times a decimal with one grid per group, and sharing hundredths into equal groups.

2 A problem from the sheet, worked out

Read the model

Count the squares shaded twice, where the columns and rows cross: each is one hundredth.



How: Shade one factor as columns, the other as rows. The squares shaded both ways are the product, in hundredths: 0.3×0.4 crosses 12 squares, so 0.12.

3 Words to know

area model a rectangle whose area is the product

factor a number being multiplied

product the answer to a multiplication

hundredth one square of the grid: 0.01

4 Watch for

- Counting all the shaded squares, not just where they cross.
- Writing 0.12 as 1.2 or 12.
- Thinking a product is always bigger than its factors.

5 Where it fits

BEFORE

5.NBT.A.1

Understand that each place is ten times the place to its right and a tenth of the one to its left.

THIS SHEET

5.3D

Show multiplying decimals, with products to hundredths, using area models.

NEXT

5.NBT.B.7

Add, subtract, multiply and divide decimals to hundredths.

6 Helping at home

Draw a 10×10 grid and shade 0.5×0.6 . Count the crossed squares together.

