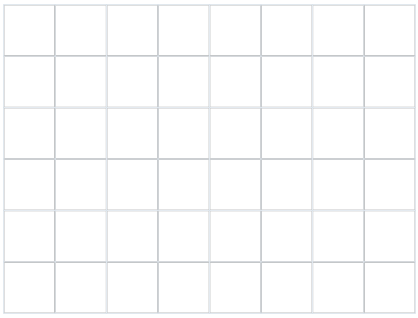
Year 6 - Multiplying Decimals by a Whole Number — Lesson Guide

Step 1

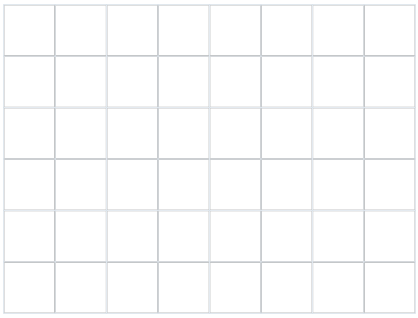
0.7 × 3 = ☐



First, we circle the multiplication sign so we know to multiply the two factors and find their product.

Step 2

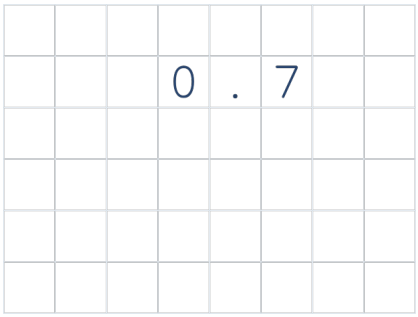
0.7 × 3 = ☐



We can use the same column method for a decimal multiplied by a whole number. The decimal point keeps its place between the ones and tenths.

Step 3

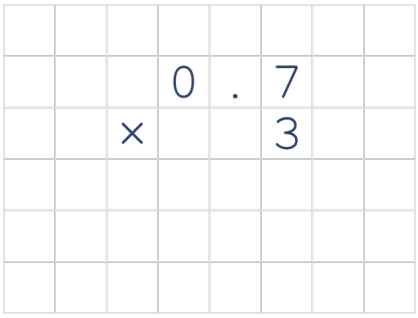
0.7 × 3 = ☐



The first digit of 0.7 is in the ones column, so we start there. Now, we write 0.7 in the correct columns, with one digit in each box.

Step 4

0.7 × 3 = ☐

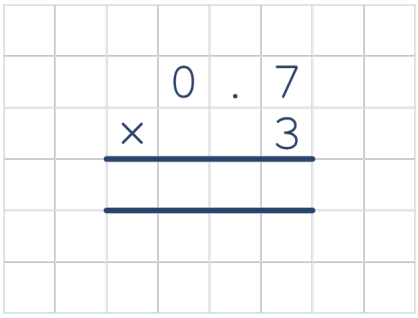


Remember: The multiplier is the whole number 3, even when it is written under a decimal digit.

Write the multiplication sign on the left. Write 3 under 7, the final digit in 0.7. The 3 means 3 lots of 0.7, so multiply each place by the whole number 3.

Step 5

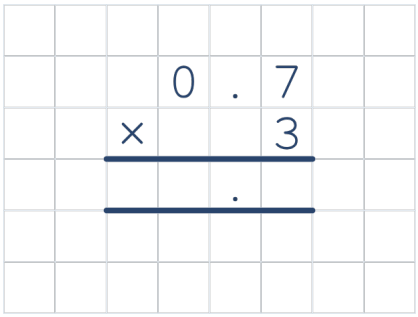
0.7 × 3 = ☐



Draw a line under 3. Leave one row for the product, then draw the second line below that row. Write exchanges below the second line.

Step 6

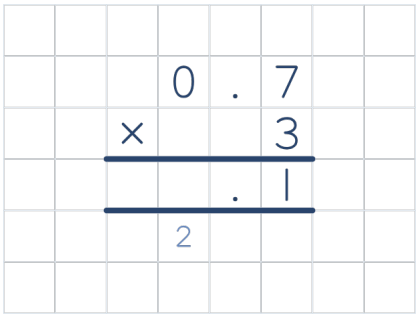
0.7 × 3 = ☐



Before we start multiplying, we put the decimal point in the answer row, directly below the decimal point in the first factor.

Step 7

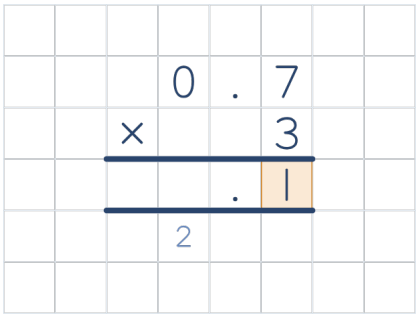
0.7 × 3 = ☐



First, we multiply the tenths, the smallest place-value column. 7 tenths × 3 = 21 tenths. As we can only write one digit per box, we partition 21 tenths into 2 ones and 1 tenth. We write the 2 ones underneath the answer in the ones column, ready for the next step. We write 1 in the tenths answer box.

Step 8

0.7 × 3 = ☐

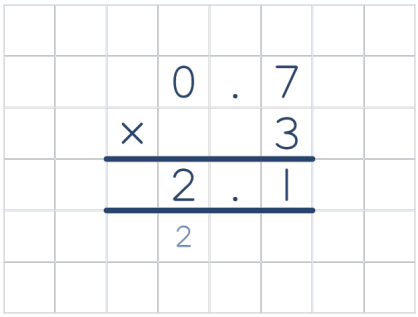


Remember: Check both places. Keep the small 2 below the ones column and the 1 in the tenths answer square.

The small 2 below the ones column stands for 2 ones. The 1 in the tenths answer square stands for 1 tenth. Together, they make 21 tenths.

Step 9

0.7 × 3 = ☐

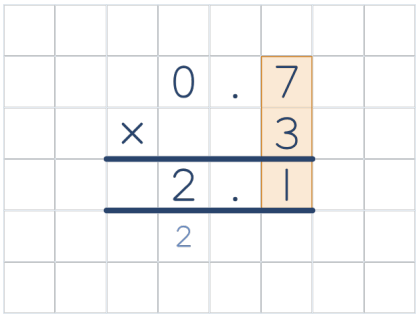


Remember: Look below the column you are working on. Add the exchanged amount written there.

Finally, we multiply the ones. 0 ones × 3 = 0 ones. Add the 2 ones shown by the small 2 below the ones column. That gives 2 ones. No exchange is needed this time. We write 2 in the ones answer box.

Step 10

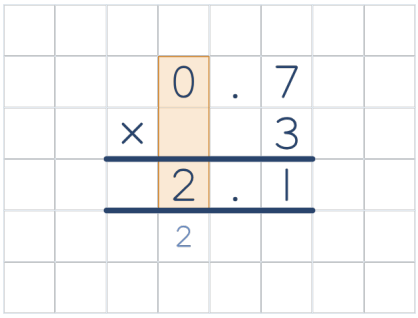
0.7 × 3 = ☐



Check the tenths column. 7 tenths × 3 = 21 tenths. Check that the answer digit and any exchange are in the correct columns.

Step 11

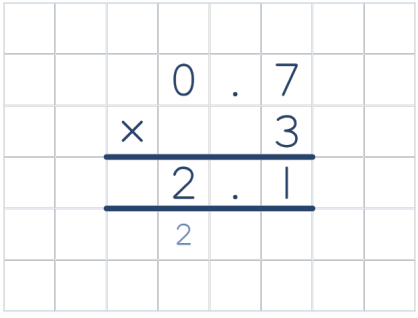
0.7 × 3 = ☐



Check the ones column. 0 ones × 3 = 0 ones. Add the 2 ones shown by the small 2 below the ones column. That gives 2 ones. Check that the ones answer square shows the correct digit.

Step 12

0.7 × 3 = **2.1**



The product is 2.1. Copy 2.1 into the answer box. Make sure you copy the answer correctly.