Success Criteria for Multiplying with Decimals

Stage Number	Instruction	Example
1	Write the question out ignoring the position of the decimal points.	3 4·9 5 <u>8·7 ×</u>
2	Multiply each number on the top row by the right most digit on the bottom. Write it on the first row of the answer line. Put "carries" in the top left corner of each digit in the row.	$ \begin{array}{r} 3 4.9 5 \\ 8.7 \times \\ \hline 2^2 4^3 4^6 6^3 5 \end{array} $
3	Put a zero in the right most place on the number line for the second row.	$ \begin{array}{r} 3 4.9 5 \\ 8.7 \times \\ 2^{2}4^{3}4^{6}6^{3}5 \\ 0 \end{array} $
4	Multiply the top row by the digit in the tens column on the bottom row.	$ \begin{array}{r} 3 4.9 5 \\ 8.7 \times \\ 2^{2}4^{3}4^{6}6^{3}5 \\ 2^{2}7 {}^{3}9^{7}6^{4}0 0 \end{array} $
5	If you have a third or fourth digit on the bottom row then repeat numbers 3 and 4 but putting two zeros for the hundreds and three zeros for the thousands. In turn, multiply each row by the digits on the bottom row in turn.	
6	When you have finished multiplying, you should have one row for each digit in the bottom row of your multiplication. Add up all your (green) rows to find your answer.	$\begin{array}{r} 3 4.95 \\ 8.7 \times \\ \hline 2^2 4^3 4^6 6^3 5 \\ 2^2 7^3 9^7 6^4 0 0 \\ \hline 30^1 4^1 0 6 5 \\ \end{array}$
7	Count the number of digits to the right of the decimal points in your question.	$\begin{array}{r} 3 4.9 5 \\ 8.7 \times \\ \hline 2^2 4^3 4^6 6^3 5 \\ 2^2 7 3 9^7 6^4 0 0 \\ \hline 30^1 4^1 0 6 5 \end{array}$

8	Place your decimal point so you have the same number of digits to the right of the decimal point in the answer as you have in the question.	3 4•9 5 8•7 ×
		$\begin{array}{r} 2^{2}4^{3}4^{6}6^{3}5\\ 2^{2}7^{3}9^{7}6^{4}00^{+}\\ 30^{1}4^{1}065\end{array}$