MATH !$★ Homework 3/5–9

(1) Compute the following products by sketching a picture that helps you get the answer.

(a) 36×25

(b) $\heartsuit\triangle \times \#!$

(2) (a) Fill in the Bohemian multiplication table below.

	@	!	♡	△	#	★	$
@							
!							
♡							
△							
#							
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$							

(b) Find four different patterns in your table. Find at least one that isn't a pattern in the Arabic numbers multiplication table. Indicate which patterns aren't like Arabic patterns.

(3) Give a clear explanation as to why two of the four patterns occur in the Bohemian multiplication table. (Remember, I should be able to tell from your description what the Bohemian pattern is. I should also be able to see a mathematical reason *why* the pattern happens. This is different from convincing me the pattern is real.)

(4) One of your students makes the following mistake in a multiplication computation:

$$\begin{array}{rrrr} & & 4 & 3 \\ \times & & 5 & 6 \\ \hline & 2 & 5 & 8 \\ & 2 & 1 & 5 \\ \hline & 4 & 7 & 3 \end{array}$$

State two reasons that you could give to your student to explain why the computation can't be correct.

(5) Make up two different real-life problems that you solve using multiplication. For each one, include a correct answer, if appropriate with units, and show how you would explain the solution to your students.