Advanced Challenge Level 1 Problem \#38 $\qquad$
This problem is concerned with a digital watch. Consider the question below. What fractional part of the time is there at least one 7 showing on the face of a standard digital watch?
You have to answer a similar question for each of the digits 0 through 9 and record the results on the table below. For each digit, you must explain how you arrived at your answer.

| digit | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| fractional <br> part |  |  |  |  |  |  |  |  |  |  |

