



Solution
187

by Benjamin Bloch, Ph.D.

- a) $1/7 = 0.142857142857142857142857\dots$ The repeat block (RB) pattern of 142857
- b) 3, 6 and 9
- c) $142857 = 27 \Rightarrow 9$; $3, 6, 9 \Rightarrow 18 \Rightarrow 9$.
- d) $2/7 = 0.28571428571428571428571428571429$ $27 \Rightarrow 9$
 $3/7 = 0.42857142857142857142857142857143$ $27 \Rightarrow 9$
 $4/7 = 0.57142857142857142857142857142857$ $27 \Rightarrow 9$
 $5/7 = 0.71428571428571428571428571428571$ $27 \Rightarrow 9$
 $6/7 = 0.85714285714285714285714285714286$ $27 \Rightarrow 9$

All have the same repeat block numbers in the same order but with a different starting digit. All have a RB SDQ of 9.

- e) $8/7 = 1.1428571428571428571428571428571$
 $9/7 = 1.2857142857142857142857142857143$
 $10/7 = 1.4285714285714285714285714285714$
 $11/7 = 1.5714285714285714285714285714286$
 $12/7 = 1.7142857142857142857142857142857$
 $13/7 = 1.8571428571428571428571428571429$

Pattern repeats itself in the same order as the first set. Again, all have a RB SDQ of 9.