1. Consider this arrangement of boxes in a 10 s grid:

(a) What numerals belong in boxes X, Y, and Z if 435 is in box A? (Label each, and if not possible, say so.)
(b) What numerals belong in boxes X, Y, and Z if 435 is in box B this time? (Label each, and if not possible, say so.)
(c) What numerals belong in boxes X, Y, and Z if 1,287 is in box A? (Label each, and if not possible, say so.)
(d) What numerals belong in boxes X , Y, and Z if 1, 287 is in box B? (Label each, and if not possible, say so.)
(e) What numerals belong in boxes $\mathrm{X}, \mathrm{Y}$, and Z if 6,032 is in box A? (Label each, and if not possible, say so.)
(f) What numerals belong in boxes X, Y, and Z if 6, 032 is in box B? (Label each, and if not possible, say so.)
(g) What numerals belong in boxes X, Y, and Z if 4, 008 is in box A? (Label each, and if not possible, say so.)
(h) What numerals belong in boxes X, Y, and Z if 4, 008 is in box B? (Label each, and if not possible, say so.)
2. Write the THREE numerals that immediately follow each one below:
(a) $1,258,046$
(b) 200,901
(c) 147,987
3. Now write the THREE numerals that immediately precede each one from Problem $\# 2$.
4. Write the THREE numerals that follow each one from Problem $\# 2$ when we count by 10 s.
5. Write the FOUR numerals that precede each one from Problem \#2 when we count by 10 s.
6. Write the FOUR numerals that follow each one from Problem $\# 2$ when we count by thousands.
7. Write the FOUR numerals that precede each one from Problem \#2 when we count by ten thousands.

Math 210 - Dr. Miller - SOLUTIONS to HW \#31C: Counting in Hindu-Arabic

1. (a) $X=425, Y=454, Z=448$
(b) $X=414, Y=443, Z=455$
(c) $X=1277, Y=1306, Z=1300$
(d) $X=1266, Y=1295, Z=1307$
(e) $X=6022, Y=6051, Z=6045$
(f) $X=6011, Y=6040, Z=6052$
(g) $X=3998, Y=4027, Z$ is not possible/goes off the grid
(h) $X=3987, Y=4016, Z=4028$
2. (a) $1,258,047$ then $1,258,048$ then $1,258,049$
(b) 200,902 then 200,903 then 200,904
(c) 147,988 then 147,989 then 147,990
3. (a) $1,258,045$ then $1,258,044$ then $1,258,043$
(b) 200,900 then 200,899 then 200,898
(c) 147,986 then 147,985 then 147,984
4. (a) $1,258,056$ then $1,258,066$ then $1,258,076$
(b) 200,911 then 200,921 then 200,931
(c) 147,997 then 148,007 then 148,017
5. (a) $1,258,036$ then $1,258,026$ then $1,258,016$ then $1,258,006$
(b) 200,891 then 200,881 then 200,871 then 200,861
(c) 147,977 then 147,967 then 147,957 then 147,947
6. (a) $1,259,046$ then $1,260,046$ then $1,261,046$ then $1,262,046$
(b) 201,901 then 202,901 then 203,901 then 204,901
(c) 148,987 then 149,987 then 150,987 then 151,987
7. (a) $1,248,046$ then $1,238,046$ then $1,238,046$ then $1,218,046$
(b) 190,901 then 180,901 then 170,901 then 160,901
(c) 137,987 then 127,987 then 117,987 then 107,987
