Write in standard form all possible Hindu-Arabic numerals that satisfy each set of clues below:

1. (a) There are no digits in the 10^5 position or higher. The thousands digit is an 8.
    (b) The digit in the 10^2 position is twice that in the ten thousands position.
    (c) The digit in the hundreds position equals that in the thousands position.
    (d) In expanded form, the number shows $3 \cdot 10^0$.
    (e) The digit in the tens position is two more that than in the ones position.

2. (a) There are no digits in the millions period or higher.
    (b) The digit in the 10^5 position equals that in the thousands position.
    (c) In expanded form, the number shows $0 \cdot 10,000$.
    (d) The sum of the digits in the thousands period is 6.
    (e) The digits in the ones period are either ones or zeros.
    (f) There are only two even digits (0 IS even).

3. (a) There are no digits in the trillions period or higher.
    (b) The billions period has only one non-zero digit; the millions period contains only 0s.
    (c) The digit in the 10^{10} position is 8.
    (d) The thousands period contains all the same digit.
    (e) The digit in the 10^4 position equals that in the 10^0 position.
    (f) The digit in the hundreds place is 8 more than the digit in the ones place.
    (g) In expanded form, the number shows the term 3×10.

4. (a) There are no digits in the millions period or higher.
    (b) All of the digits are different; four of them are even.
    (c) The digit in the 10^3 position is one more than that in the hundred thousands position.
    (d) The digits in the tens and thousands position are 5 and 6 in some order.
    (e) The digit in the 10^2 position is 4 times that in the 10^0 position.

5. (a) There are no digits in the ten billions position or higher.
    (b) The numeral contains exactly eight 0s.
    (c) The digits in the thousands period are all equal.
    (d) The digit in the 10^9 position is less than 3.
    (e) In expanded notation, the number shows $8 \times 10,000,000$.

6. (a) The numeral has no digits in the millions period or higher.
    (b) The digits in the tens and 10^4 positions are equal, and even.
    (c) The ones period and thousands period use the same digits, but not necessarily in the same order.
    (d) The digit in the thousands place is 5 more than that in the ten thousands.
    (e) The sum of the digits in the 10^0 position and the tens position is 3.

7. (a) The numeral has only three odd digits; one of them is in the 10^7 position.
    (b) There are no odd digits in the ones period.
    (c) Beginning with the ten thousands digit, the digits count in order up to 9 as one reads right to left.
    (d) The digit 6 appears four times, but not in the 10^1 position.
    (e) No other digit is repeated besides the 6.
    (f) The digit in the 10^3 position equals that in the millions position.

8. (a) No digits are repeated except for zeros.

   (b) The numeral shows the digits "002," uninterrupted and in that order.

   (c) The highest position used is the one immediately to the left of the position with a 3 in it.

   (d) The digit in the ten thousands position is 3 times that in the ones position.

   (e) The digit in the 10^3 position is 3 less than that in the ten thousands position.

   (f) The digits add up to 11.

9. (a) The digit in the 10^0 position equals that in the highest position used.

   (b) The sum of the digits in the millions period is 3, but no ones appear in the period.

   (c) There are no digits in the 10^9 position or higher.

   (d) The numeral has four 1s in it.

   (e) The digit in the hundred thousands place is the sum of the ones digit and the digit in the 10^6 place.

10. (a) Every digit is used exactly once, except for 7 and 3, which are not used at all.

    (b) The digit in the highest position is odd.

    (c) The digit in the thousands position is one more than that in the 10^7 position.

    (d) Beginning with the 10^2 position, the digits count down in order (i.e., consecutively) as you read left to right.

    (e) The ten thousands digit is even; the digit 9 is adjacent to the digit 1.

1. $48,853$

2. $303,011$ *or* $303,101$ *or* $303,110$

3. $80,000,000,830$ *or* $80,000,111,931$

4. $50,710,710$ *or* $50,810,810$ *or* $50,910,910$

5. $415,862$ *or* $435,862$ *or* $475,862$ *or* $495,862$

6. $2,080,000,000$ *or* $1,080,000,000$

7. $127,721$ *or* $305,503$

8. 9876546606 *or* 9876546626

9. 63002 *or* 530021

10. 300311113 *or* 30311113 *or* 3611113

11. 19802654 *or* 19082654