Patterns and Mental Math

1. **a.** Fill in the table, continuing the pattern in the top row. Then add 29 to each number in the top row to get the number in the bottom row. *Hint: instead of adding 29, add 30, and subtract 1!*

n	9	18	27	36	45	54				
$n + 29$	*38*									

b. What skip-counting pattern is there in the top row?

c. Does the bottom row have any skip-counting pattern?

2. **a.** Fill in the table, continuing the pattern in the top row. Then subtract 39 from each number in the top row to get the number in the bottom row. *Hint: instead of subtracting 39, subtract ___, and add __!*

n	660	600	540	480	420			
$n - 39$								

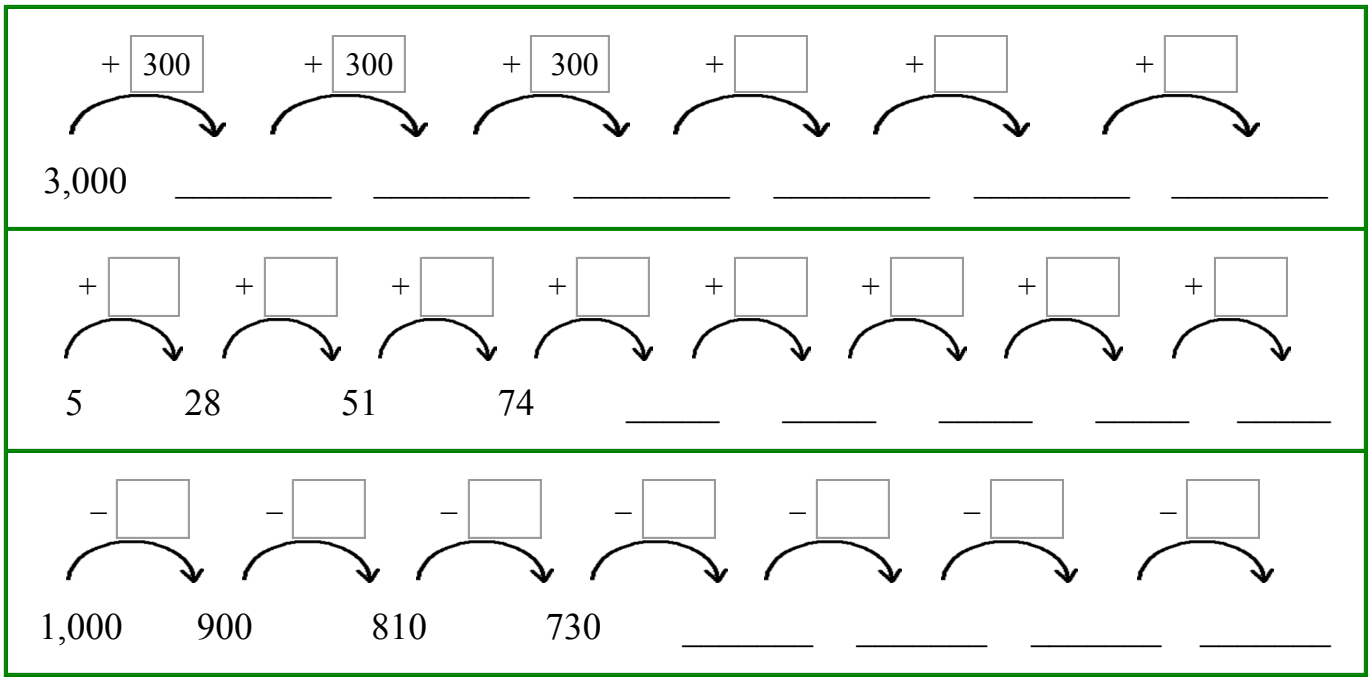
b. What skip-counting pattern is there in the top row?

c. Does the bottom row have any skip-counting pattern?

3. Subtract mentally. Compare the problems in each box—and be careful!

a.	**b.**	**c.**
500 – 3 = _____	600 – 2 = _____	1,000 – 7 = _____
500 – 30 = _____	600 – 20 = _____	1,000 – 70 = _____
500 – 300 = _____	600 – 200 = _____	1,000 – 700 = _____
500 – 33 = _____	600 – 22 = _____	1,000 – 77 = _____
500 – 303 = _____	600 – 202 = _____	1,000 – 707 = _____

4. Figure out the patterns and continue them.



5. Figure out an easy way to subtract 999 from any number mentally.
For example, explain how to easily subtract 1,446 – 999.

6. Solve the problems.

a. One alarm clock costs $11 and another costs $8 more.
How much would the two cost together?

b. It rained five days in June and six days in July.
How many days did it *not* rain in those two months (in total)?

c. Amy is 134 cm tall and her mom is 162 cm tall.
What is the difference in their heights?

d. Jack bicycled his favorite 28 km route on Tuesday and on Wednesday. On Thursday and Saturday he bicycled along a route that was 6 km shorter. How many kilometers did he ride in total?

e. Of the 45 students, 18 are girls. How many more boys are there than girls?