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1. Joe Lucky lost all his money playing 21 and craps. He would be very sad but tomorrow is his lucky birthday. His age is going to be a number that is 21 more than 7 times the sum of its digits. How old is he?
  2. What is the last digit of the product of the sum and the difference of the smallest 2005-digit number and the greatest 2004-digit number?
  3. From the number 2456 you can create a new number by the following way:  $24+2+4=30$ ,  $56+5+6=67$ , so the new number is 3067. From which 4-digit number could you get 2005 this way?
  4. On the vampire ship there are 8 cabins for storing blood. Each of them has a different lock on it. The captain gave all 8 keys to Fred. The keys have no marks on them. In the worst case scenario, how many tries does Fred need in order to find the right key to every lock?
  5. The servants of the king are eagerly looking for the magic herbs on the field to cure the king's illness. Shoulder to shoulder they carefully comb the 50-meter-long field by taking two steps forward and one step back. How many steps do they take forward and how many back if every step is 50 cm long?
  6. In a bag there are 5 pairs of green socks and 5 pairs of blue socks. You cannot tell the difference between a left sock and a right sock. With your eyes closed, how many socks do you have to take out of the bag so that so would have for sure: a) 1 pair of socks b) 2 pairs of blue socks c) 1 pair of blue and 1 pair of green socks ?
  7. Write the odd numbers  $1, 3, 5, \dots, 17$  into the fields of a  $3 \times 3$  grid so that the sums of the numbers in each row, column and diagonal is 27.