**Exer 3.5** **[Computation/variability/variability103]**

Use R to generate the sequence of 101 numbers: $0, 1, 2, 3, \cdots, 100$.

1. What's the mean value?
   25 50 75 100 Exer 3.5-1
2. What's the median value?
   25 50 75 100 Exer 3.5-2
3. What's the standard deviation?
   10.7 29.3 41.2 53.8 Exer 3.5-3
4. What's the sum of squares?
   5050 20251 103450 338350 585200 Exer 3.5-4

Now generate the sequence of perfect squares $0, 1, 4, 9, \cdots, 10000$, or, written another way, $0^2, 1^2, 2^2, 3^2, \cdots, 100^2$. (Hint: Make a simple sequence 0 to 100 and square it.)

1. What's the mean value?
   50 2500 3350 4750 7860 Exer 3.5-5
2. What's the median value?
   50 2500 3350 4750 7860 Exer 3.5-6
3. What's the standard deviation?
   29.3 456.2 3028 4505 6108 Exer 3.5-7
4. What's the sum of squares?
   5050 20251 338350 585200 2050000000 Exer 3.5-8