Problem 1. Compute $\sum_{n=0}^{4}(2n-1)$.
  A) -1 B) 0   C) 8   D) 15   E) 16

Solution. D) □

Problem 2. Compute $\sum_{n=1}^{0}(2n-1)$.
  A) -1 B) 0   C) 8   D) 15   E) 16

Solution. B) □

Problem 3. Compute $\prod_{n=1}^{0}\sum_{m=1}^{\infty}n^m$.
  A) 0   B) 1   C) ∞ D) Not defined

Solution. B) □

Definition 4. If n is a non-negative integer then the *factorial* of n, written $n!$, is defined to be

$$\prod_{k=1}^{n}k.$$

Problem 5. Compute 0!.
  A) 0   B) 1   C) ∞ D) Not defined

Solution. B) □

Problem 6. Is the following formula correct for all integers n?

$$n! = n(n-1)!$$

  A) Yes   B) No   C) The question does not make sense

Solution. C) □

Problem 7. Which of the following formulas is different from the others?
  A) $(n)_n$ B) $\prod_{k=1}^{n}k$ C) $n!$ D) They are all the same

Solution. C) □