6.1.16

7 стульев

а) 7 гостей $\qquad A_7^7 = \dfrac{7!}{0!} = 5040$

б) 3 гостя $\qquad A_7^3 = \dfrac{7!}{(7-3)!} = \dfrac{7!}{4!} = 5 \cdot 6 \cdot 7 = 210$

6.1.17

$A_5^9 = \dfrac{9!}{4!} = \cancel{}$

а) $\dfrac{\cancel{x} \cdot \cancel{x} \cdot 3 \cdot 2 \cdot 1}{1 \cdot \cancel{x} \cdot \cancel{x} \cdot \cancel{2} \cdot 1}$ $\qquad 6 \cdot 4 = \boxed{24}$

$C_7^4 = \dfrac{8!}{(8-4) \cdot 4!} = \cancel{9!}$

$\dfrac{5!}{7} = 8$ $\qquad \dfrac{\cancel{5} \cdot \cancel{2} \cdot \cancel{x} \cdot \cancel{x} \cdot 1}{3 \cdot 2 \cdot 1 \cdot \cancel{x} \cdot \cancel{x}}$

б) $\cancel{x} \cancel{x} \cancel{x} - \cancel{x}$ $\qquad \dfrac{5 \cdot 3 \cdot 3 \cdot \cancel{2}}{\cancel{2}} \cancel{/\!\!/} \cancel{50} =$

$\begin{array}{ccccc} \cancel{x} & 3 & \cancel{x} & 2 & 1 \\ x & - & x & - & \\ x & - & - & - & x \end{array}$ $\qquad \begin{array}{ccccc} - & x & - & x & - \\ - & x & - & - & x \\ & \text{ищи} & & & \end{array}$ $\qquad \begin{array}{ccc} - & - & x - x \\ - & - & x \end{array}$

$6 \cdot 3 = \boxed{36}$

6.1.18

а) СОЛНЦЕ $\qquad P_6 = 6! = 1 \cdot 2 \cdot 3 \cdot 4 \cdot 5 \cdot 6 = \boxed{720}$

б) ТЕАТР $\qquad P_5 = \dfrac{120}{2} = \boxed{60}$

в) МИЛИ $\qquad P_4 = 1 \cdot 2 \cdot 3 \cdot 4 = \dfrac{24}{2! \cdot 2!} = \boxed{6}$

г) SOS $= P_3 = 1 \cdot 2 \cdot 3 = \dfrac{6}{2} = \boxed{3}$

6.1.19

8	9	10	11	12	13	14	15
4	7	3	6	—	—	—	—
4	4	3	3	2	2	1	1

$= \boxed{576}$

$4! \cdot 4! = \boxed{576}$