Samples **Probabilities**

1. For the following questions let s_1 and s_2 be random natural numbers chosen independently, where s_1 is between 6 and 7 (inclusive), and s_2 is between 7 and 8 (inclusive). In each case, find the probability p that:

(**1**) s_1 is odd?

(**2**) $s_1 = 7$?

(**3**) $s_1 \geq 6$?

(**4**) s_1 is odd and $s_1 \geq 6$?

(**5**) s_1 is odd or $s_1 \geq 6$?

(**6**) s_1 is odd given that $s_1 \geq 6$?

(**7**) Both s_1 and s_2 are odd ?

(**8**) At least one of s_1 and s_2 is odd ?

(**9**) s_1 is odd given that s_2 is even ?

2. For the following questions let r_1 and r_2 be random natural numbers chosen independently, where r_1 is between 1 and 8 (inclusive), and r_2 is between 6 and 7 (inclusive). In each case, find the probability p that:

(**1**) r_1 is odd?

(**2**) $r_1 = 6$?

(**3**) $r_1 > 6$?

(**4**) r_1 is odd and $r_1 > 6$?

(**5**) r_1 is odd or $r_1 > 6$?

(**6**) r_1 is odd given that $r_1 > 6$?

(**7**) Both r_1 and r_2 are odd ?

(**8**) At least one of r_1 and r_2 is odd ?

(**9**) r_1 is odd given that r_2 is even ?

3. For the following questions let t_1 and t_2 be random natural numbers chosen independently, where t_1 is between 1 and 7 (inclusive), and t_2 is between 5 and 7 (inclusive). In each case, find the probability p that:

(**1**) t_1 is even?

(**2**) $t_1 = 7$?

(**3**) $t_1 \leq 4$?

(**4**) t_1 is even and $t_1 \leq 4$?

(**5**) t_1 is even or $t_1 \leq 4$?

(**6**) t_1 is even given that $t_1 \leq 4$?

(**7**) Both t_1 and t_2 are even ?

(**8**) At least one of t_1 and t_2 is even ?

(**9**) t_1 is even given that t_2 is even ?