

Answer the following questions:

1	A die is rolled. Write down all the possible sample space.	
2	A die is thrown two times. Write down all the possible sample space.	
3	A die is thrown once. Describe the following events: (a) a number less than 5 (b) a number less than 7 (c) a number greater than 3 (d) number 5 (e) a multiple of 2 (f) a multiple of 3 (g) even numbers >2 (h) a number less than 4 (i) prime numbers	
4	A die is thrown once. Find the probability of these events: (a) a number less than 6 (b) a number less than 7 (c) a number greater than 3 (d) number 5 (e) a multiple of 2 (f) a multiple of 3 (g) an even number >2 (h) a number less than 4 (i) a prime number (j) a number greater than or equal to 3 (k) a number equal to or greater than 5 (l) a number more than 6	

Answer Key:

1	$S = \{1,2,3,4,5,6\}$
2	$S = \{(1, 1), (1, 2), (1, 3), (1, 4), (1, 5), (1, 6), (2, 1), (2, 2), (2, 3), (2, 4), (2, 5), (2, 6), (3, 1), (3, 2), (3, 3), (3, 4), (3, 5), (3, 6), (4, 1), (4, 2), (4, 3), (4, 4), (4, 5), (4, 6), (5, 1), (5, 2), (5, 3), (5, 4), (5, 5), (5, 6), (6, 1), (6, 2), (6, 3), (6, 4), (6, 5), (6, 6)\}$
3	$S = \{1,2,3,4,5,6\}$ (a) $\{1, 2, 3, 4\}$ (b) $\{1,2,3,4,5,6\}$ (c) $\{4,5,6\}$ (d) $\{5\}$ (e) $\{2,4,6\}$ (f) $\{3,6\}$ (g) $\{4, 6\}$ (h) $\{1,2,3\}$ (i) $\{2,3,5\}$
4	$S = \{1,2,3,4,5,6\}$ (a) $5/6$ (b) $6/6 = 1$ (c) $3/6 = \frac{1}{2}$ (d) $1/6$ (e) $3/6 = \frac{1}{2}$ (f) $2/6 = 1/3$ (g) $2/6 = 1/3$ (h) $3/6 = \frac{1}{2}$ (i) $3/6 = \frac{1}{2}$ (j) $4/6 = 2/3$ (k) $2/6 = 1/3$ (l) 0