

# A List of Unnamed Probability Distributions

## List of PMF

1.  $f(x) = 6x(1-x); 0 \leq x \leq 1$
2.  $P(x) = \frac{x-3}{6}, \text{ for } x = 4, 5, 6$
3.  $P(x) = \frac{3x+4}{21}, x = 0, 1, 2$
4.  $P(X) = \frac{3-|4-x|}{k}; x = 2, 3, 4, 5, 6$
5.  $P(X) = \frac{5-|6-x|}{k}; x = 1, 2, 3, 4, 5$
6.  $P(X) = \frac{7-|5-x|}{k}; x = 1, 2, 3, 4, 5, 6$
7.  $P(X) = \frac{6-|7-x|}{k}; x = 1, 2, \dots, 10$
8.  $P(x) = \frac{x+1}{k}; x = 1, 2, 3, 4$
9.  $P(x) = \frac{2x+k}{56}; x = -3, -2, -1, 0, 1, 2, 3$
10.  $P(x) = \frac{1}{14}(a+2x); x = -3, -2, -1, 0, 1, 2, 3$
11.  $P(x) = k(x-2); x = 3, 4, 5, 6, 7, 8$
12.  $P(x) = \frac{x-1}{k}; x = 2, 3, 4, 5$
13.  $P(x) = \frac{3-|4-x|}{k}; x = 2, 3, 4, 5, 6$
14.  $p(x) = \frac{x+4}{30}; x = 0, 1, 2, 3, 4$

## Joint PMF

1.  $P(X, Y) = \frac{x+2y}{28}; x = 0, 1; y = 0, 1, 2, 3$
2.  $P(X, Y) = \frac{2x+3y}{45}; x = 0, 1, 2; y = 0, 1, 2$

3.  $P(X, Y) = \frac{x + y + 1}{42}; \quad x = 0, 1, 2; \quad y = 0, 1, 2, 3$
4.  $P(X, Y) = \frac{2x + y + 1}{52}; \quad x = 1, 2; \quad y = 1, 2, 3, 4$
5.  $P(X, Y) = \frac{3x + y}{48}; \quad x = 1, 2; \quad y = 0, 1, 2, 3$
6.  $P(x, y) = \frac{1}{21}(x + y); x = 1, 2, 3 \text{ \& } y = 1, 2$
- 7.

$$f(x) = \frac{1}{b - a}; a \leq x \leq b$$

## PDF

1.  $f(x) = 6x(1 - x); 0 \leq x \leq 1$
2.  $f(z) = \frac{2}{9}(3z - z^2); 0 \leq z \leq 3$
3.  $f(x) = k(x + 1); 0 \leq x \leq 1$
4.  $f(x) = kx(x - 1); 1 \leq x \leq 4$
5.  $f(x) = kx^2 + kx + \frac{1}{8}; 0 \leq x \leq 2$
6.  $f(x) = \frac{1}{30}(k + 2x); 2 < x < 5$
7.  $f(x) = 2x; 0 < x < 1$
8.  $f(x) = \frac{1}{30}(3 + 2x); 2 < x < 5$
9.  $f(x) = ax^2; 0 < x < 4$
10.  $f(x) = kx; 0 < x < 4$
11.  $f(x) = 3x^2; 0 \leq x \leq 1$
12.  $f(y) = k(3y + 5); 1 < y < 5$
13.  $f(z) = \frac{2}{9}(3z - z^2); 0 \leq z \leq 3$