

# Assignment-3

EE22BTECH11012-A.Chhatrapati

**Question 10.13.3.37)** A child's game has 8 triangles of which 3 are blue and rest are red, and 10 squares of which 6 are blue and rest are red. One piece is lost at random. Find the probability that it is a

- (i) triangle
- (ii) square
- (iii) square of blue colour
- (iv) triangle of red colour

**Solution:**

Variable	Value	Description
X	1	Triangle
	0	Square
Y	1	Blue coloured
	0	Red coloured

- (i)  $p_X(1) = \frac{8}{18}$
- (ii)  $p_X(0) = \frac{10}{18}$
- (iii)  $p_{XY}(X=0, Y=1) = \frac{6}{18}$
- (iv)  $p_{XY}(X=1, Y=0) = \frac{5}{18}$