M 362K Pre-Class Work for 1/22

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1-46

(a)

This problems can be considered as inserting 2 borders into 6 slots. However, since each bin can have 0 balls, the total number of distribution is $6^2 = 36$

(b)

This problem has the same setting, but each bin should have at leat 1 ball. Therefore the total number of distribution should be ${}_6C_2 = 15$

1-53

(a)

$(x+3)^4 = {}_4C_0x^4 + {}_4C_1x^3y^1 + {}_4C_2x^2y^2 + {}_4C_3x^1y^3 + {}_4C_4y^4 = x^4 + 4x^3y^1 + 6x^2y^2 + 4x^1y^3 + y^4$

Sample Exam 8

Hamburger, French Fries, Coke

Hamburger, French Fries, Diet Coke

Hamburger, French Fries, Chocolate Shake

Hamburger, Potato Chips, Coke

Hamburger, Potato Chips, Diet Coke

Hamburger, Potato Chips, Chocolate Shake

Cheeseburger, French Fries, Coke

Cheeseburger, French Fries, Diet Coke

Cheeseburger, French Fries, Chocolate Shake

Cheeseburger, Potato Chips, Coke

Cheeseburger, Potato Chips, Diet Coke

Cheeseburger, Potato Chips, Chocolate Shake

Double-Double, French Fries, Coke

Double-Double, French Fries, Diet Coke

Double-Double, French Fries, Chocolate Shake

Double-Double, Potato Chips, Coke

Double-Double, Potato Chips, Diet Coke

Double-Double, Potato Chips, Chocolate Shake