

b) At least two hearts? = 24 5-18 C5-18 C4 × C1 = 15576 ways

c) A flush (all five cards the same suit?

Example 3: Molly has 8 pictures with her family and 5 pictures with her friends. Her wall shelf will only hold 5 pictures. Molly decides she wants to use 3 family and 2 friend pictures. In how many ways can Molly arrange the pictures of the shelf?

Todor select of 8C3×5C2 = 560 matters photos arrange 560 × 51 = 67200

Page







## 09:42

## **◄** Classroom





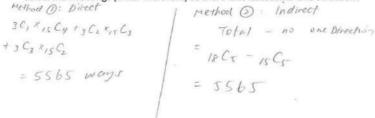




MDM4U Unit 3: Combinations

## 3.4 Problem Solving with Combinations (Day 2)

Example 1: A student has been selected to choose the morning songs for this week. On his very limited iPod, he has 10 Drake songs, 5 Taylor Swift songs and 3 One Direction songs. In how many ways can he select the five songs (order irrelevant) so there is at least *some* One Direction?



Example 2: The card game Euchre uses only 24 cards: 9s, 10s, jacks, queens, king and aces of each suit. Five card hands are dealt to the players. How many euchre hands contain:

a) Two or three hearts?

b) At least two hearts?

c) A flush (all five cards the same suit?

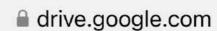
Example 3: Molly has 8 pictures with her family and 5 pictures with her friends. Her wall shelf will only hold 5 pictures. Molly decides she wants to use 3 family and 2 friend pictures. In how many ways can Molly arrange the pictures of the shelf?

order select photon: 
$$p C_3 \times_5 C_2 = 560$$

Grounge -1  $560 \times 5! = 67,200$  mays

(give answer at the Page 3 / 4













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