Permutation	on/Combin	ation	Workshee
Advanced	Functions	& Mo	deling

Name.

In how many ways can you arrange 8 different shirts on hangers in the closet?

Six people wish to play cards, but only 4 of them at a time can play. How many differen 2. groups of 4 are possible?

The choices for a sandwich are 4 different, 5 different cheeses and 3 breads. How mar different sandwiches of 2 meats, 2 cheeses and 1 bread could you make? 3.

4 2 · 5 C2 · 3 C1 = 180 5 apples, 7 oranges and 4 peaches are mixed in a fruit box. If 4 pieces of fruit are 4. picked out at random, what is the probability of picking:

Total Possible Out of 40 sketches submitted, 8 were picked at random to be displayed. If you submitted 5 sketches, what is the probability that exactly 2 of your sketches were

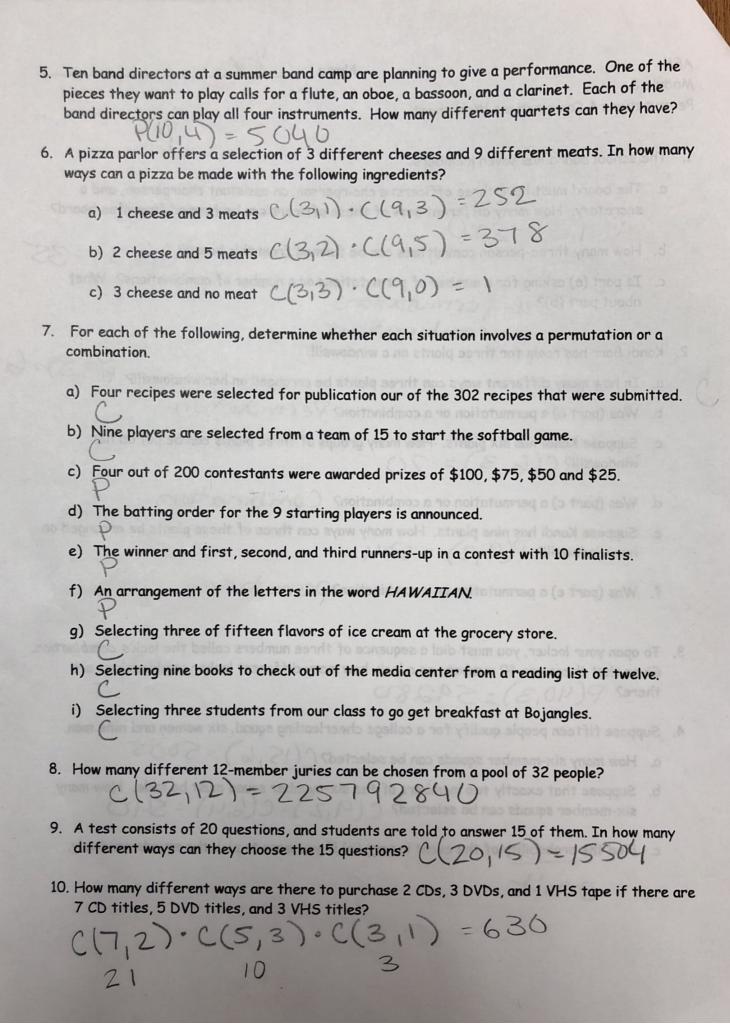
picked? 35 (2° 35 (6) = .21

36 boys played basketball at Honors Camp in New York and 10 of them were selected for the US Pre-Olympic training team. If Leesville Road High School sent 8 boys to Honors Camp, what is the probability that exactly 3 of them were selected for the team

The DJ has 25 CD's to use for the dance party, and he can put 6 of them in the disc 7 changer. If 18 of the CD's were techno music, what is the probability that 4 techno CD' changer. If 18 of the clos work are going into the changer? 18 4 7 7 = .36

A math class has 20 students. (a) In how many ways can 3 students be selected for 8. refreshment committee? (b) In how many ways can 3 students volunteer to bring a cake, a box of cookies and a case of Pepsi?

(, = 1140 b) 203 = 6840



- 11. How many ways are there to choose a committee of 3 people from a group of 7 people? (7,3) = 35
- 12. How many ways are there to choose a chairperson, secretary, and treasurer, from a group of 7 people?

P(7,3)=210

- 13. Kerry Oki can do his homework in pencil or pen, using lined or unlined paper, and on one or both sides of each page. How many different ways can Kerry prepare his homework? C(2,1) C(2,1) = 8
- 14. A customer in an ice cream shop can order a sundae with a choice of 10 flavors, a choice of 4 flavors of sauce, 3 flavors of whipped cream, and with or without a cherry on top. How many different sundaes are possible?

16 x4 x3 x 2 = 240

15. In how many orders can eight actors be listed in the opening credits of a movie if the leading actor must be listed first or last?

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