

[6-a.	$\begin{pmatrix} 6 \\ 2 \end{pmatrix} + \begin{pmatrix} 7 \\ 2 \end{pmatrix} + \begin{pmatrix} 4 \\ 2 \end{pmatrix}$	
	I can choose from any subject so run use Vivon (A. I then can	7
	so run use Vision (A). I then can	

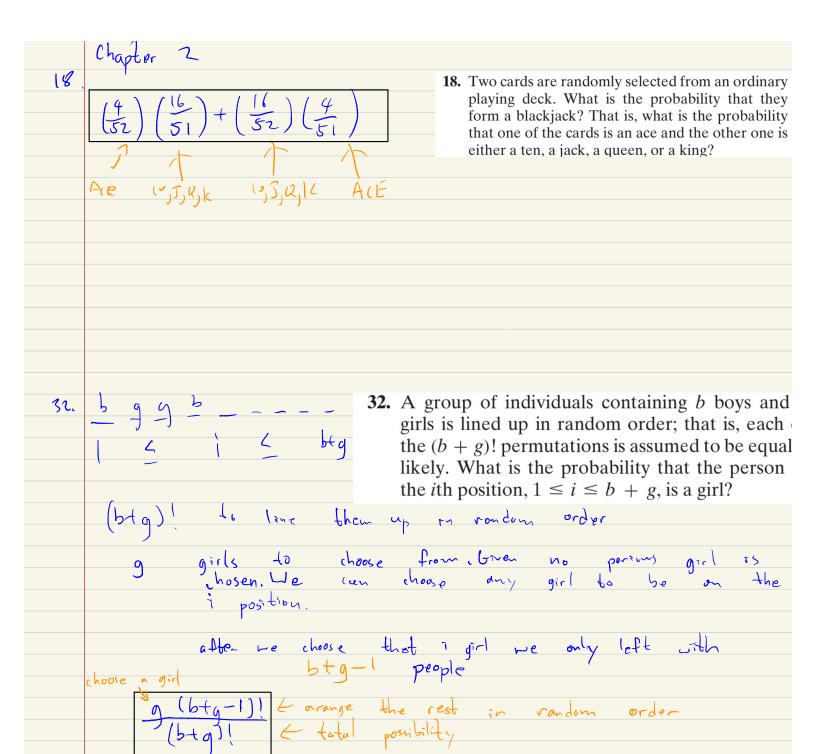
- **16.** A student has to sell 2 books from a collection of 6 math, 7 science, and 4 economics books. How many choices are possible if
 - (a) both books are to be on the same subject?
 - **(b)** the books are to be on different subjects?

5).
$$\binom{6}{1}\binom{7}{1}\binom{4}{4} + \binom{6}{1}\binom{7}{1}\binom{4}{1} + \binom{6}{0}\binom{7}{1}\binom{4}{1}$$

 $= \binom{6}{1}\binom{7}{1} + \binom{6}{1}\binom{4}{1}\binom{4}{1}\binom{4}{1}$

$$\begin{pmatrix} 5 \\ 2 \end{pmatrix} \cdot \begin{pmatrix} 6 \\ 2 \end{pmatrix} \cdot \begin{pmatrix} 4 \\ 3 \end{pmatrix}$$

18. A committee of 7, consisting of 2 Republicans, 2 Democrats, and 3 Independents, is to be chosen from a group of 5 Republicans, 6 Democrats, and 4 Independents. How many committees are possible?



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