

The starting cell below is starting with TWO homologous pair of chromosomes and is heterozygous for both traits (Aa) and (Gg). You need to show & label when the following happens:

DNA duplication

The splitting of sister chromatids

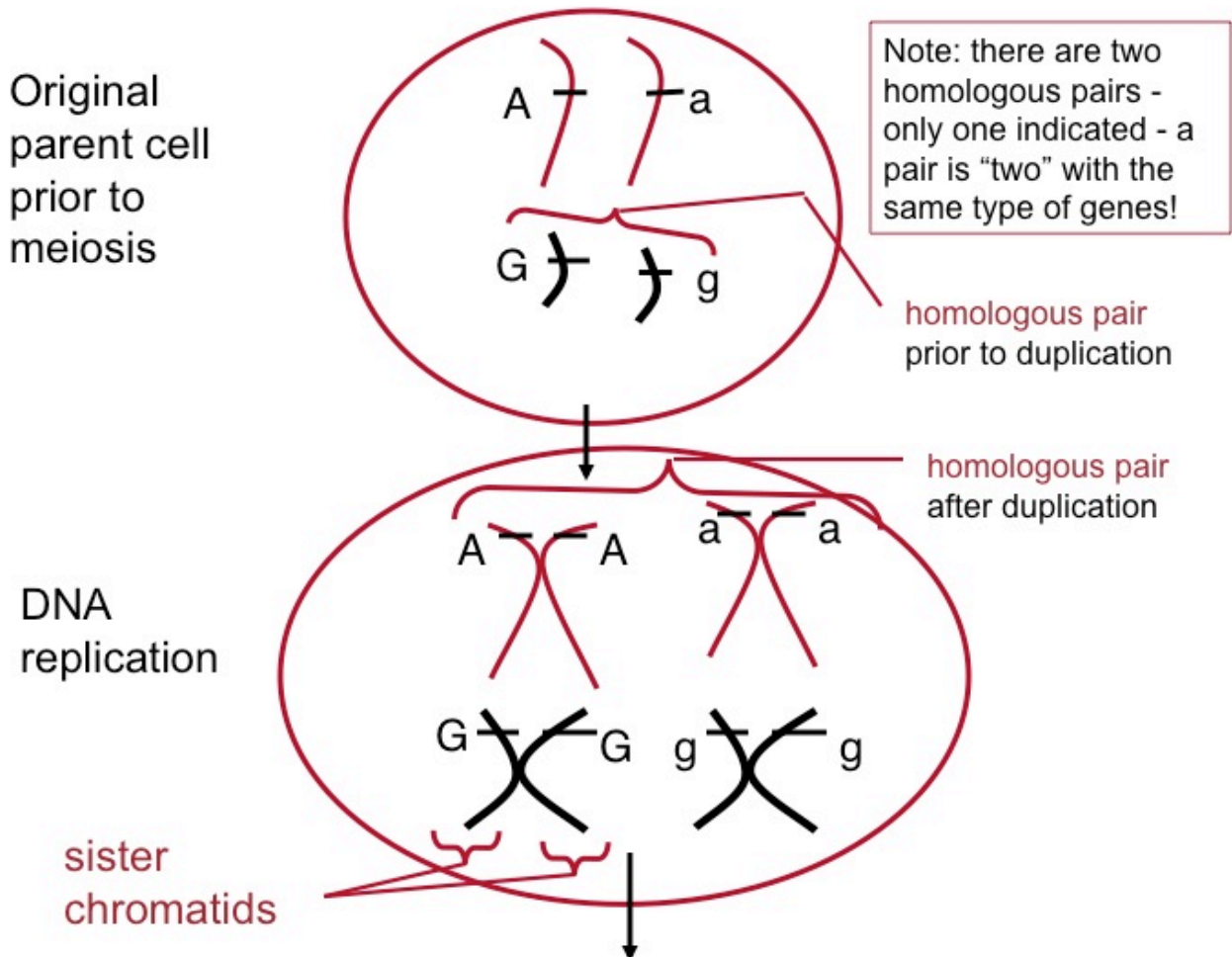
The splitting of the homologous pair.

Show **crossing over** in your drawing for the “A/a” gene ONLY.

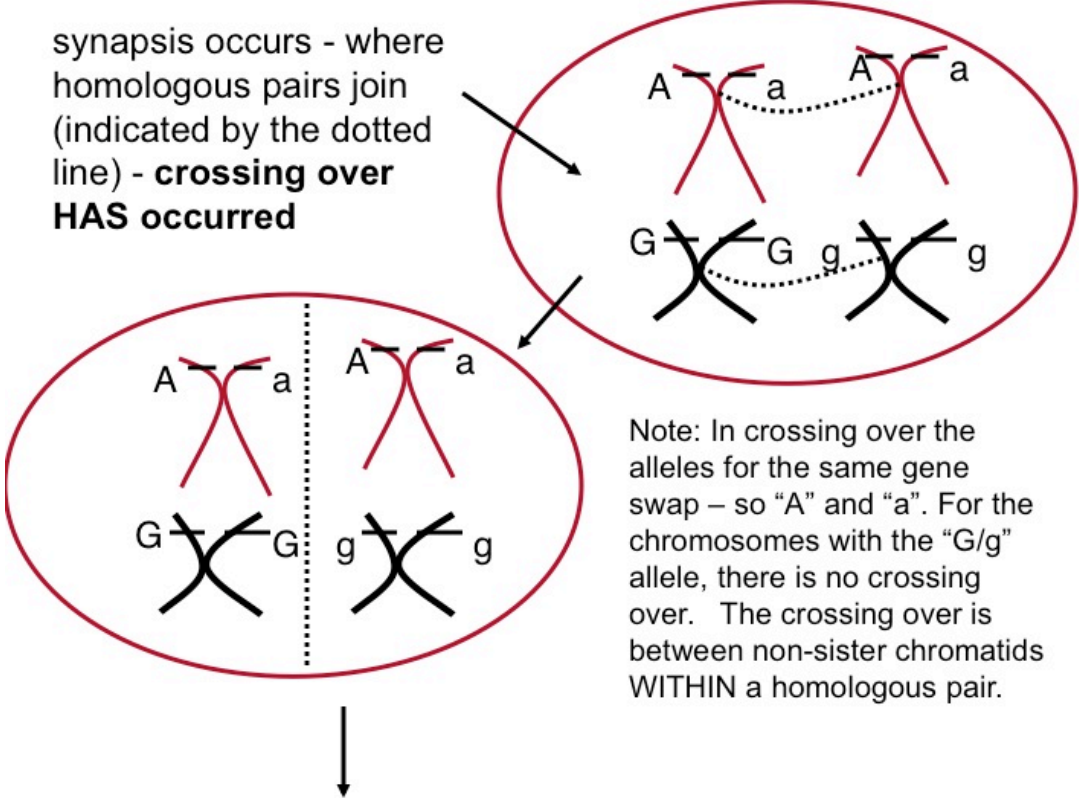
At some point in your diagram label one pair of sister chromatids, & label the gametes.

Label one of the homologous pairs AFTER DNA duplication.

REMEMBER the “A” and “a” are representing alleles for the same gene and “G” and “g” are representing alleles for another gene. You need to follow those alleles through the process of meiosis. The line pointing to the “A” (and other letters) are representing the loci where on the chromosome the gene is located.



synapsis occurs - where homologous pairs join (indicated by the dotted line) - **crossing over HAS occurred**



Note: In crossing over the alleles for the same gene swap - so "A" and "a". For the chromosomes with the "G/g" allele, there is no crossing over. The crossing over is between non-sister chromatids WITHIN a homologous pair.

Homologous pairs split going into two separate daughter cells

