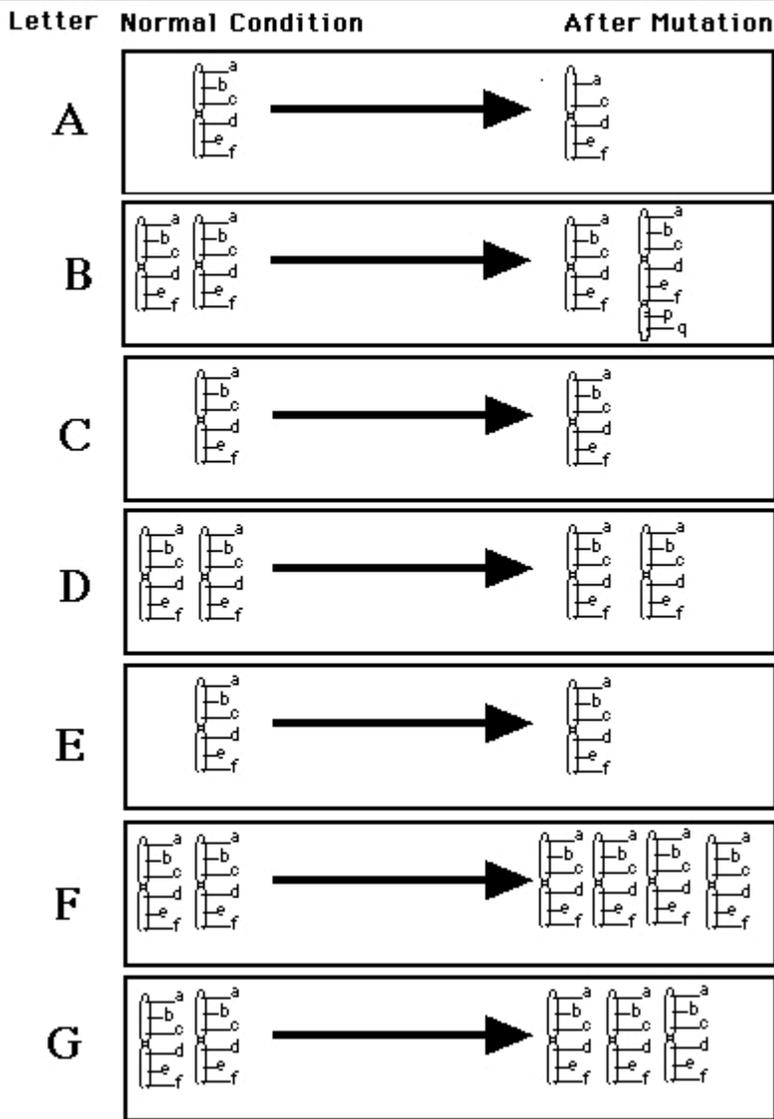


Part 3: Chromosome Rearrangements



Match the LETTER of the drawing to the definition /term below

CHROMOSOME MUTATION DEFINITIONS:

1. Inversion - A defect in the chromosome in which a segment of the chromosome breaks off and reinserted in the same place but in the reverse direction relative to the rest of the chromosome.
2. Polyploidy - Having more than two complete sets of chromosomes
3. Translocation - A transfer of a chromosomal segment to a new position, especially on a nonhomologous chromosome.
4. Trisomy- The condition of having three copies of a given chromosome in each somatic cell rather than the normal number of two.
5. Deletion -The loss, as through mutation, of one or more nucleotides from a chromosome.
6. monosomy - chromosomal abnormality consisting of the absence of one chromosome from the normal diploid number
7. 'Nondisjunction' is the failure of chromosome pairs to separate properly during cell division. This could arise from a failure of homologous chromosomes to separate in meiosis I, or the failure of sister chromatids to separate during meiosis II or mitosis. The result of this error is a cell with an imbalance of chromosomes.

I'm My Own Grandpa

(Lonzo & Oscar)

Now many, many years ago, when I was twenty-three,
I was married to a widow who was pretty as could be.
This widow had a grown-up daughter who had hair of red.
My father fell in love with her, and soon they, too, were wed.
This made my dad my son-in-law and changed my very life,
My daughter was my mother, cause she was my father's wife.
To complicate the matter, even though it brought me joy,
I soon became the father of a bouncing baby boy.
My little baby then became a brother-in-law to Dad,
And so became my uncle, though it made me very sad.
For if he was my uncle, then that also made him brother
Of the widow's grown-up daughter, who, of course,
was my stepmother.
Father's wife then had a son who kept him on the run,
And he became my grandchild, for he was my daughter's son.
My wife is now my mother's mother, and it makes me blue,
Because, although she is my wife, she's my grandmother, too.
Now if my wife is my grandmother, then I'm her grandchild,
And every time I think of it, it nearly drives me wild,
For now I have become the strangest case you ever saw
As husband of my grandmother, I am my own grandpa!

I'm my own grandpa. I'm my own grandpa.
It sounds funny, I know, but it really is so,
Oh, I'm my own grandpa.

This is a wonderful song that was originally written in the 40's.
Draw the pedigree of this unique family for 20 extra credit points!
Can he really be his own grandpa?? Show me how! Good Luck!

Draw the family pedigree here