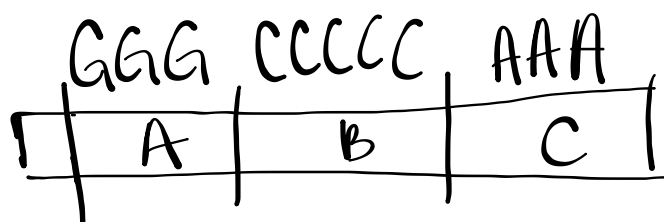


March 13th

Study roots week 19

DNA fingerprinting probability



$\frac{1}{500}$ chance of having GGG @ A

$\frac{1}{90}$ " " CCCCC @ B

$\frac{1}{120}$ " " AAA @ C

$$\frac{1}{500} \times \frac{1}{90} \times \frac{1}{120} = \frac{1}{5,400,000}$$

Genetic Engineering

Main ideas:

1. entire organisms can be cloned
2. new genes can be added to an organism's DNA.
3. produces organisms w/ new traits.

1. Entire organisms can be cloned

[Clone]: genetically identical copy of a gene or of an organism.

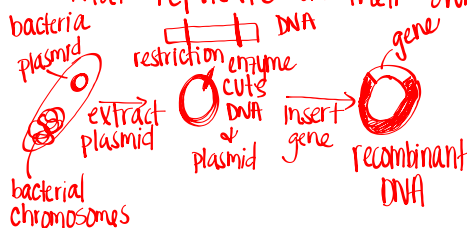
- ex: plants - through their roots
- bacteria - binary fission
- Starfish - regeneration
- identical twins

2. New genes can be added to an organism's DNA

[Genetic Engineering]: Changing an organism's DNA to give it new traits.
 Genetic modification
 Recombinant DNA Technology

[Recombinant DNA]: DNA that contains genes from more than one organism.

↳ is made by inserting DNA into a **[plasmid]** closed loop of DNA that replicate on their own



3. produces organisms w/ new traits

[Transgenic]: An organism that has 1 or more genes from another organism inserted into its genome.
 transformed
 genetically modified organisms (GMO)