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9.16.09

Announcements

PS 3 Due now

PS 2 Returned after class

Practice problems online for mapping

Internship in genetic counseling

*No pages 120-133 in text

LAST TIME: MAPPING

THIS TIME: MAPPING & GENETICAL ETHICS

v	cv ⁺	ct ⁺	580
v ⁺	cv	ct	512
v	cv	ct ⁺	45
v ⁺	cv ⁺	ct	40
v	cv	ct	89
v ⁺	cv ⁺	ct ⁺	94
v ^r	cv ^r	ct _R	3
v ^r	cv _r	ct ^r	<u>5</u>
			1448

v ct⁺ crossovers:

$$\text{Singles } 89 + 94 + 3 + 5$$

ct cv crossovers:

$$45 + 40 + 3 + 5$$

$$\text{Map Distance} = \frac{89 + 94 + 5 + 3}{1448} \times 100 = 13.2 \text{ cm}$$



$$\text{Map Distance} = \left[\frac{(40 + 45 + 3 + 5)}{1448} \right] \times 100 = 6.4 \text{ cm}$$

Double crossovers aren't always as frequent as expected = interference.

- Due atleast in part to topological constraint.

Start w/ coefficient of coincidence

$$CC = \frac{\text{Observed Doubles}}{\text{Expected Doubles}} = \frac{8}{?}$$

Expected Doubles:

Law of Independent events (product rule).

- If crossovers are random AND independent
- Then expected doubles is product of two singles.

freq. v-cb single	freq. cb-cv singles	Total prog.	=	
(0.132)	(0.064)	(1448)	=	12

$$CC = \frac{8}{12} = 0.66$$

→ Interference is fraction

We did NOT see

$$I = 1 - CC = 1 - 0.66 = 0.33$$