One-Factor Genetics Practice Problems

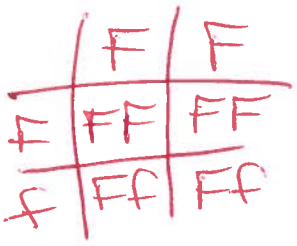
Show your work

The following information pertains to human characteristics or genetic disorders.

F = Freckles / f = No Freckles
D = Dimples / d = No Dimples
A = Normal / a = Albinism
B = Brown Eyes / b = Blue Eyes
P = Polydactyly / p = Normal

1. When crossing a homozygous person with freckles and a heterozygous person, what is the chance of having a child with freckles?

Parents : FF x Ff

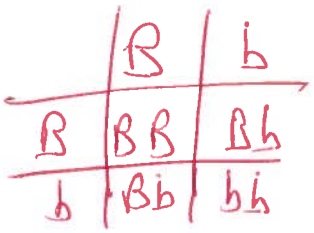


4/4 Freckles

a. 0%
b. 25%
c. 50 %
d. 75%
e. 100%

2. When crossing two heterozygous people with brown eyes, what is the chance of producing a child with blue eyes?

Parents : Bb x Bb

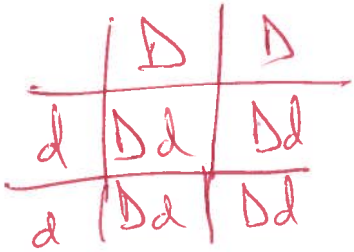


3/4 Brown
1/4 Blue

a. 0%
b. 25%
c. 50 %
d. 75%
e. 100%

3. When crossing a homozygous person with dimples with a person without dimples, what is the chance of producing a child without dimples?

Parents : DD x dd

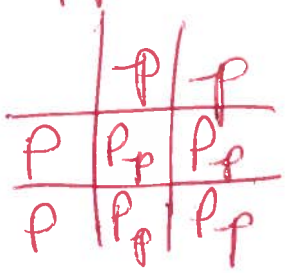


4/4 Dimples

a. 0%
b. 25%
c. 50 %
d. 75%
e. 100%

4. When crossing a normal person with a homozygous person with polydactyly, what is the chance of producing a child that has polydactyly?

Parents : Pp X PP



4/4 Polydactyly

a. 0%

b. 25%

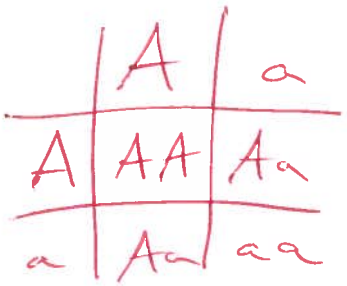
c. 50 %

d. 75%

e. 100%

5. When crossing two heterozygous normal people (without albinism), what is the chance of producing a child that is normal?

Parents : Aa X Aa



3/4 Normal

1/4 Albino

a. 0%

b. 25%

c. 50 %

d. 75%

e. 100%