D – dominant allele, healthy individual

d – recessive allele , diseased individual

Case 1

P: ♀ Dd × ♂ Dd

G: D d D d

F_1: DD (25%); Dd (50%); dd (25%)

Case 2

P: ♀ Dd × ♂ dd

G: D d d

F_1: Dd (50%); dd (50%)

Case 3

P: ♀ dd × ♂ dd

G: d d

F_1: dd (100%)

A child can be diseased, if he is homozygous recessive dd. Therefore the parents have to be heterozygous Dd or one of the parents has to be diseased homozygous recessive dd and another one is heterozygous Dd or both parents can be diseased and homozygous recessive dd to pass d gamete to next generation.