

Test Cross

Solving an Unknown Genotype

Test Cross

- ◆ When an organism has the dominant phenotype, its genotype can be either heterozygous or homozygous dominant
 - ◆ (you can't tell by looking at it).
- ◆ In order to find out, do a test cross using an homozygous, recessive organism

Test Cross

- ◆ In Dalmatian dogs, the gene for black spots is dominant to the gene for liver colored spots. If a breeder has a black spotted dog, how can she find out whether it is homozygous (BB) or heterozygous (Bb) spotted dog?
 - ◆ B = black spots and b = liver spots
- ◆ Mate the black spotted dog (B?) with a liver spotted dog(bb)

If black-spotted dog is homozygous dominant . . .

	B	B
b	Bb	Bb
b	Bb	Bb

If black-spotted dog is heterozygous. . .

	B	b
b	Bb	bb
b	Bb	bb