

Working Genetics Problems

writing a key

When a trait has two forms and one trait is expressed over the other, the trait that shows up is **dominant**.

The trait that is hidden or masked is **recessive**.

In humans, the gene for brown eye color is **dominant** over the gene for blue eyes.



Dominant traits are represented by upper case letters. **B - brown**

Recessive traits are represented by the same letters as dominant traits but lower case. **b - blue**



You must work genetics problems the same way you work math problems:

- Read and reread the problem
- Sort and prioritize the information
- Eliminate unnecessary information

Begin by writing the **key**. Information needed to write the key will either be stated in the problem or given.

Read the problem and write the key.

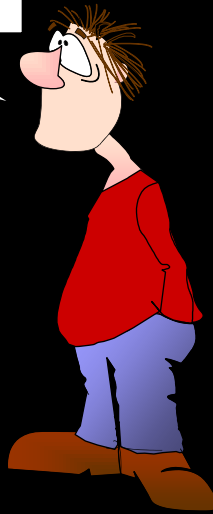
In garden peas, **t**all plants are dominant over short.

Use the first letter, upper case, of the dominant gene to start the key.

T - tall
t - short

'Big' T is tall;
'little' t is short.

Use the **same** letter, lower case, for the recessive gene.



Read the problem and write the key.

In garden peas for pod shape trait,
inflated is dominant to constricted.

Eliminate any unnecessary information.

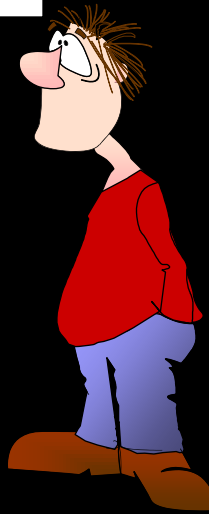
What is dominant?

What is recessive?

I- inflated

i- constricted

'Big' I is inflated;
little' i is constricted.



Avoid these common mistakes when writing your key.

In garden peas for the pod shape trait, inflated is dominant to constricted.

Do not use the trait.

~~P - inflated
p - constricted~~

Do not use the letter of the recessive trait.

~~C - inflated
c - constricted~~

Let's practice. Write the key on your own paper.

In rabbits, white coat color is dominant to black.

In mice, black coat color is dominant over tan and short tails are dominant over long.

In roses, red flower color is dominant over white.