Hey guys, I think you’ll find this interesting! You may need to have your definitions from the inheritance worksheet to hand to refresh your memory.

Inherited disorders are caused by **mutations** - which is a change in a gene or a chromosome. It can cause a change in a characteristic.

e.g. albinos – the gene for pigment changes, and melanin cannot be made so skin and hair/fur are pale and eyes appear red in colour.

Gene mutations are fortunately usually **recessive** (Use small letter c to represent this) and can be hidden by a dominant allele. For example in Cystic fibrosis a sufferer must have 2 copies of the defective recessive gene, one from each parent.



Polydactyly – having extra fingers or toes – is caused by a **dominant** allele (Use capital letter P to represent this) of a gene and can therefore be passed on by only one parent who has the disorder.

Research Task – Complete the table using the info above and your own research. Don’t forget, a good researcher does not get all their information from the opening lines shown in the search results. OPEN THE ARTICLES!! 😊

|  |  |  |  |
| --- | --- | --- | --- |
| Inherited disorder | Symptoms | Dominant or recessive | Possible genotypes of sufferer |
| Cystic fibrosis |  |  |  |
| Sickle cell anaemia |  |  | ss |
| Polydactyly |  | Dominant |  |

Draw the Punnett squares for this situation:

One parent is homozygous WITH polydactyly, the other doesn’t have the condition.