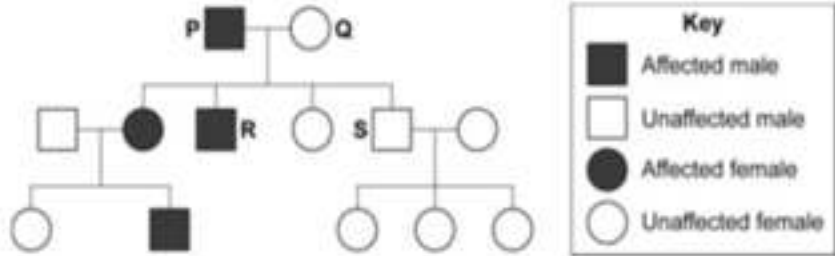


0	1
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Sometimes babies are born with extra fingers as shown in the diagram.

This condition is called polydactyly.



The diagram also shows the inheritance of polydactyly in a family.

Polydactyly is caused by a dominant allele, **D**.

The recessive allele of the gene is represented by **d**.

0	1	.	1
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Use **one** genetic diagram to show the inheritance of the polydactyly gene by **R** and **S**.

[4 marks]

(genotype / gametes from P / father) D and d [1]

(genotype / gametes from Q / mother) d and d / accept d [1]

offspring genotypes correctly derived from correct gametes [1]

offspring phenotypes R and S identified [1]

For example:

	Father		Mother
	Dd		dd
	Dd	Dd	dd
	affected	affected	unaffected
	D	d	
	D	d	
d	Dd	dd	
d	Dd	dd	

TOP TIP : The diagrams here show how you can present the answer. If you used a letter other than what they asked, you would probably still get the mark, but better to play safe (always use a key though). The punnet square is an alternative way to show the answer. it doesn't matter which way round you put the parent genotypes.