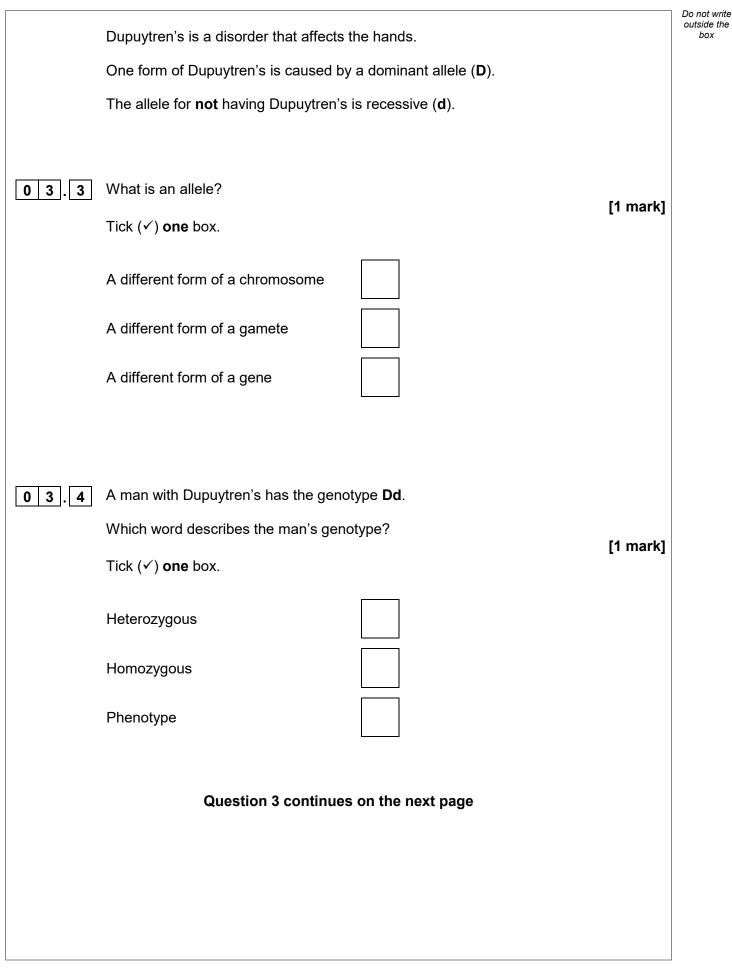
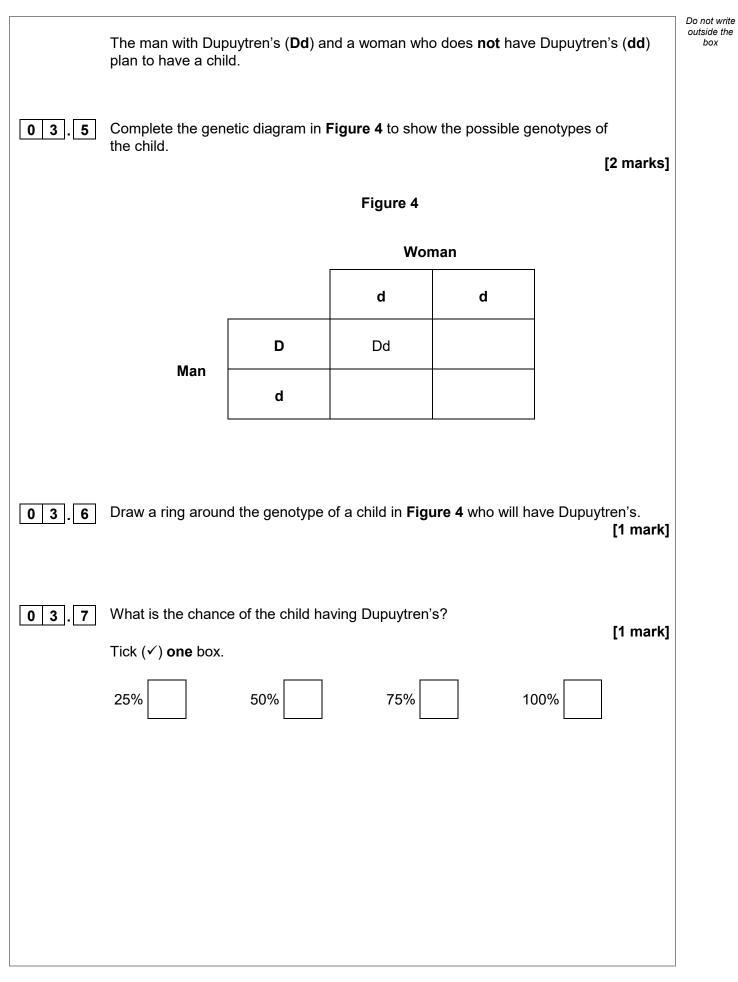
0 3	Sperm cells and egg cells are formed by meiosis.	Do not write outside the box
03.1	During meiosis a cell divides twice. How many sperm cells are formed when a cell divides by meiosis? [1 mark]	
03.2	Human body cells contain 46 chromosomes. How many chromosomes are in each human egg cell? [1 mark]	







box





0 3 8	A genetic disorder develops as a result of a change in a gene.	Do not write outside the box
	What scientific term describes a change in a gene?	
	[1 mark]	
03.9	People with a family history of some genetic disorders are offered embryo screening.	
	Suggest one way embryo screening can help people with a family history of a genetic disorder.	
	[1 mark]	
		10
	Turn over for the next question	
	Turn over ►	
1 3	IB/M/Jun20/8461/2F	

Question	Answers	Extra information	Mark	AO / Spec. Ref.
03.1	4 / four		1	AO1 4.6.1.2
03.2	23 / twenty three	do not accept 23 pairs	1	AO1 4.6.1.2
03.3	a different form of a gene		1	AO1 4.6.1.6
03.4	heterozygous		1	AO2 4.6.1.6
03.5 mark with 3.6 and 3.7	Dd / dD dd dd	allow 2 correct for 1 mark	2	AO2 4.6.1.1 4.6.1.2 4.6.1.6
03.6 mark with 3.5 and 3.7	ring around any Dd	allow ecf from question 03.5	1	AO2 4.6.1.6
03.7 mark with 3.5 and 3.6	percentage must match answer given to questions 03.5 and 03.6	if no answer in question 03.5 allow 50 %	1	AO3 4.6.1.6
03.8	mutation / mutated	do not accept mutant	1	AO1 4.6.2.1

03.9	 any one from: to help them prepare to inform whether to consider having an abortion to find out if they have passed on the disorder 	allow to see if the child / embryo has the disorder allow answers referring to genetic disorders, or specific example such as Dupuytren's / cystic fibrosis	1	AO3 4.6.1.7
Total			10	