

Question Number	Answer	Mark
<b>3(a)(i)</b>	<p>The only correct answer is C two</p> <p><i>A is not correct because there is one maternal and one paternal chromosome with three gene loci</i></p> <p><i>B is not correct because there is one maternal and one paternal chromosome with three gene loci</i></p> <p><i>D is not correct because there is one maternal and one paternal chromosome with three gene loci</i></p>	<b>(1)</b>

Question Number	Answer	Additional guidance	Mark
<b>3(a)(ii)</b>	<p>A description that makes reference to the following points:</p> <ul style="list-style-type: none"> <li>• uncoiling (of chromosome) (1)</li> <li>• used in protein synthesis / DNA replication (in S phase) (1)</li> </ul>	<p>Accept correct reference to histones / to form chromatin</p> <p>Accept transcription</p>	<b>(2)</b>

Question Number	Answer	Additional guidance	Mark
<b>3(b)(i)</b>	<ul style="list-style-type: none"> <li>• prophase I</li> </ul>		<b>(1)</b>

Question Number	Answer	Additional guidance	Mark
<b>3(b)(ii)</b>	<p>The only correct answer is C three</p> <p><i>A is not correct because ABe could not be formed by one chiasmata</i></p> <p><i>B is not correct because ABe could not be formed by one chiasmata</i></p> <p><i>D is not correct because ABe could not be formed by one chiasmata</i></p>		<b>(1)</b>

Question Number	Answer	Additional guidance	Mark
<b>3(b)(iii)</b>	<p>An explanation that makes reference to two of the following points:</p> <ul style="list-style-type: none"> <li>• alleles b and e are closer together (1)</li> <li>• therefore {crossing over / chiasma} is less likely to occur between these alleles (1)</li> </ul>	<p>Accept converse for A and E</p> <p>Accept converse for A and E</p>	<b>(2)</b>