

Question Number	Answer	Additional guidance	Mark
4(a)(i)	<ul style="list-style-type: none"> to make the {chromosomes / chromatids} visible (1) 	Accept DNA ignore organelles / cells	(1)

Question Number	Answer	Additional guidance	Mark
4(a)(ii)	<p>The only correct answer is C R</p> <p><i>A is not correct because the cell is in telophase</i></p> <p><i>B is not correct because the cell is in prophase</i></p> <p><i>D is not correct because the cell is in anaphase</i></p>		(1)

Question Number	Answer	Additional guidance	Mark
4(a)(iii)	<ul style="list-style-type: none"> addition (1) correct calculation (1) 	<p>Example of calculation: 33 and 150</p> <p>$(33 \div 150) \times 100 = 22$ (%) or $(33 \div 150) = 0.22$</p> <p>Correct answer with no working shown scores full marks</p>	(2)

Question Number	Answer	Additional guidance	Mark
4(b)	<p>An answer that includes the following points:</p> <ul style="list-style-type: none"> (tendrils coiling) {secures / gives support to} the pea shoot / prevents the pea shoot falling over (1) allows the pea plant to {grow taller / climb higher} (than other plants) (1) (therefore) the pea plant will {outcompete other plants / absorb more light (energy) / carry out more photosynthesis} (1) 	<p>Accept allows the plant to climb up other {plants / structures}</p> <p>Accept allows the pea plant to divert fewer resources into {strengthening stem / producing (named) supporting tissue (in stem)}</p> <p>ignore increase surface area</p>	(3)

Question Number	Answer	Additional guidance	Mark
4(c)	<p>An explanation that includes the following points:</p> <ul style="list-style-type: none"> independent assortment (of chromatids) (1) will result in {mixture of (maternal and paternal) chromatids / different combination of alleles} in the gametes (1) which gametes are involved (in fertilisation) are random (1) 	<p>Accept random assortment</p> <p>Accept chromosomes</p>	(3)