

Question Number	Answer	Additional Guidance	Mark
7(b)(i)	<ol style="list-style-type: none"> lycopene has {no significant effect / little effect} on the number of sperm in the control rats ; lycopene increases the number of sperm in rats exposed to PCBs ; credit correct manipulation of data to quantify mp1 or 2 ; 	<p>“lycopene increases the mean number of sperm produced” or “lycopene increases the number of sperm in both groups” can only be awarded one of these marks.</p> <p>mp1 (mean) increase is 30×10^6 mp2 (mean) increase is 120×10^6</p>	(2)

Question Number	Answer	Additional Guidance	Mark
7(b)(ii)	<ol style="list-style-type: none"> idea of treating all rats with PCBs ; idea that a control group of rats is not fed with fruit; idea of {feeding / dosing / eq} (the other) groups of rats with {different / certain} types of fruits ; idea of determining the number of sperm produced for each group of rats ; 	<p>1. This is a stand alone mark so can be given even if answer does not refer to a control group 1. Piece together if necessary</p> <p>3.ACCEPT fruit juice IGNORE concentrations ACCEPT named fruits</p>	(3)