Adding and Subtracting Fractions Mark Scheme		
1(a)	$\frac{1}{3}+\frac{1}{3}=\frac{2}{3}$	**[1]**
1(b)	$\frac{1}{5}+\frac{3}{6}=\frac{1}{5}+\frac{1}{2}=\frac{2}{10}+\frac{5}{10}=\frac{7}{10}$	**[1]** Any workings that cancel down to correct answer
1(c)	$\frac{5}{7}-\frac{1}{3}=\frac{15}{21}-\frac{7}{21}=\frac{8}{21}$	**[1]** Any workings that cancel down to correct answer
1(d)	$\frac{8}{11}+\frac{3}{6}-\frac{1}{11}=\frac{16}{22}+\frac{11}{22}-\frac{1}{11}$	**[1]**
	$=\frac{27}{22}-\frac{1}{11}=\frac{25}{22}$	**[1]** Any workings that cancel down to correct answer
2	$\frac{1}{4}+\frac{1}{3}\equiv\left(\frac{1}{4}\times\frac{3}{3}\right)+\left(\frac{1}{3}\times\frac{4}{4}\right)$	The amount that John has left can be found be adding the two costs outlined and subtracting this from the total amount he is paid. To do this we first have to add together the two fractions.
	$\frac{1}{4}+\frac{1}{3}=\frac{4}{12}+\frac{3}{12}=\frac{7}{12}$	**[1]** mark for rewriting the two costs with the same common denominator **[1]** mark for addition
	$1-\frac{7}{12}=\frac{5}{12}$	**[1]** mark for final answer (has to be in simplest form)
3	$\frac{2}{15}+\frac{1}{3}+\frac{1}{5}=\frac{2}{15}+\left(\frac{1}{3}\times\frac{5}{5}\right)+\left(\frac{1}{5}\times\frac{3}{3}\right)$	
	$\frac{2}{15}+\frac{5}{15}+\frac{3}{15}=\frac{10}{15}$	**[1]** mark for finding the fraction of the book read before Tuesday
	$1-\frac{10}{15}=\frac{5}{15}$	**[1]** mark for working out amount that must have been read on Tuesday
	$=\frac{1}{3}$	**[1]** mark for writing fraction in its simplest form
4(a)	$\frac{2}{36}+\frac{8}{36}+\frac{9}{36}$	**[1]** mark for identifying 36 as the simplest common denominator
	$\frac{19}{36}$	**[1]** mark for the correct addition
	$1-\frac{19}{36}=\frac{17}{36}$	**[1]** mark for correct fraction that are not oak, beach or pine

Turn over ►

4(b)	$\frac{2}{36}$ are oak hence. $\frac{40}{720}$ of the trees in the forest are oak.	**[1]** Correct method identified
	$\frac{9}{36}$ are pine hence $\frac{180}{720}$ of the trees are pine	**[1]** Calculation of Oak and Pine
	Hence there are a total of 220 oak and pine trees. So there is 500 trees in the forest that are not oak or pine.	**[1]** Final answer
5	$\frac{9}{4}+\frac{9}{4}+\frac{11}{8}+\frac{11}{8}=\text{total perimeter of the rectangular field}$	**[1]** Correct method used for perimeter
	$\frac{18}{8}+\frac{18}{8}+\frac{11}{8}+\frac{11}{8}=\frac{58}{8}\text{km}$	**[1]** Perimeter calculated
	Answer $= 7\frac{1}{4}\ \text{km}$	**[1]** mark for final answer (has to be a mixed fraction)
6	$\frac{4}{40}$ from Italy and $\frac{10}{40}$ from Sweden.	**[1]** mark for identifying 40 as the simplest common denominator
	$1-\left(\frac{4}{40}+\frac{10}{40}\right)=\frac{26}{40}$ from the UK	**[1]** Calculating the UK fraction
	$\frac{26}{40}$ is equivalent to $\frac{520}{800}$ so 520 out of 800 passengers are from the UK. Hence there are 800 passengers in total	**[1]** Final answer of 800

END