Yr 7 Level 8 Practice Assessment		**Answers**		
A	**Numbers & the number system**	**Answer**	**Mark**	**Criteria**
1(a)	$\dfrac{7}{15}$ as decimal	$7 \div 15 = \underline{0.4\overset{\bullet}{6}}$	1	1
1(b)	0.12121212... as fraction	Let x = 0.1212121212... 100x = 12.1212121212... 99x = 12 x = $\underline{12}$ = $\underline{4}$ 99 33	1	1
B	**Calculating**		**Mark**	**Criteria**
2(a)	a)(i) 0.000043 in standard form	4.3×10^{-5}	1	3
	(ii) 7×10^4 as ordinary number	70000	1	
(b)	b) $3.25 \times 10^5 \times 2.4 \times 10^{-1}$	7.8×10^4	1	
C	**Algebra**		**Mark**	**Criteria**
3 (a)	Factorise $x^2 - x - 12$	**(x - 4)(x + 3)**	1	4
(b)	Factorise $x^2 - 49$	**(x + 7)(x – 7)**	1	
4 (a)	Expand: (3x - 2)(3x – 1)	$9x^2 - 3x - 6x + 2$ **$9x^2 - 9x + 2$**	1	5
(b)	Expand: $(x - y)^2$	(x - y)(x - y) **$x^2 - 2xy + y^2$**	1	
5	Make 'a' the subject of: $ma^2 = F$	$ma^2 = F$ $a^2 = \dfrac{F}{m}$ **a = $\sqrt{\dfrac{F}{m}}$**	1	6
6	$S = \dfrac{u^2 + v^2}{2a}$ Substitute: u = -1, v = -2, a = 2	$S = \dfrac{u^2 + v^2}{2a}$ $= \dfrac{(-1)^2 + (-2)^2}{2 \times 2}$ $= \dfrac{1 + 4}{4}$ $= \dfrac{5}{4}$ **= 1.25**	1	7
	Data Handling		**Mark**	**Criteria**
7	Comment on Maths and English results	English results – on average these are better - less spread of results indicated by the smaller interquartile range	1	15
8 (a)	Probability of White OR Blue ball	0.3 + 0.25 **0.55**	1	16
(b)	Probability car fails MOT on brakes & lights	$\dfrac{1}{5}$ x $\dfrac{1}{10}$		

		$= \dfrac{1}{50}$	1	
9 (a)	Complete tree diagram		2	17
(b)	Probability both sets of lights are RED	**0.4 x 0.3** **= 0.12**	1 1	

First set — Second set

Red — 0.3 — Red
0.4 — Red — 0.7 — Not red
0.6 — Not red — 0.3 — Red
— 0.7 — Not red