	Mean, Median, Mode, and Range Mark Scheme	
1	Total marks for boys = 1012 Total mark for girls = 924	[1] Totals calculated
	Mean mark $= (1012 + 924) \div 45$ $= 1936 \div 45$	[1] For dividing by 45
	$1936 \div 45 = 43.0$	[1] For correct answer (to 1 d.p.)
2	Using trial and improvements e.g. $2 \times 6\text{ kg} + 1 \times 16\text{ kg} = 28$ $28 / 3 \neq 12$ $2 \text{ x } 6\text{ kg} + 2 \times 16\text{ kg} = 44$ $44 / 4 \neq 12$ $3 \times 6\text{ kg} + 2 \times 16\text{ kg} = 50$ $50 / 4 \neq 12$	[1] For trial and improvement
	$2 \times 6\text{ kg} + 3 \times 16\text{ kg} = 60\text{ kg}$ $60 / 5 = 12\text{ kg}$ Two 6 kg bags and three 16 kg bags.	[1] For least number of bags needed
3 (a)	Median = 1.5 kg	[1]
	Mean $= 10.8 \div 7 = 1.54$ kg	[1] (to 2 d.p.)
	Mode = 1.3 kg	[1]
3 (b)	Range = 0.9 kg	[1]
3 (c)	Total weight of seven rabbits = 10.8 kg	[1] Total calculated
	$5 \text{ x } 1.6\text{ kg} = 8\text{ kg}$	[1] Total remaining
	Total weight of two removed rabbits = $10.8 - 8 = 2.8\text{ kg}$ So 1.1 kg and 1.7 kg **or** 1.3 kg and 1.8 kg	[1] Final answer

4	Mean pay $= 50.64 \div 6 = £8.44$	[1]
	Median = £8.46	[1]
	Mode = £8.48	[1]
	Yes, the mean, median and mode suggest that Sarah is correct to think that most of her friends are paid more.	[1] Suitable explanation
5(a)	Mode = 14 minutes	[1]
5(b)	Median $= (17 + 18) \div 2 = 17.5$ minutes	[1]
5(c)	Mean $= 180 \div 10 = 18$ minutes	[1]
	Range $= 27 - 11 = 16$ minutes	[1]
6	Facebook Mean $= 463 \div 5 = 92$ minutes 36 seconds	[1]
	Twitter Mean $= 480 \div 5 = 96$ minutes	[1]
	Difference = 3 minutes 24 seconds	[1]
7(a)	$Range$: $180\ cm\ - 120\ cm = 60\ cm$	[1]
7(b)	Median: 141 cm	[1]
7(c)	Mode: 130 cm	[1]
7(d)	Mean: $\frac{1864}{13}$	[1]
	$= 143\ cm\ (3\ s.f)$	[1]

END