Y10 Foundation ANSWERS

- Ratio

Q1.

Question	Answer	Mark	Mark scheme	Additional guidance
	30:1	M1	for stating 450 : 15 oe **or** 450 ÷ 15 (=30) oe **or** 1 : 30	90 : 3
		A1	cao	Ignore units throughout.

Q2.

Question	Working	Answer	Mark	Notes
		5 : 2 : 10	P1	for process to calculate total for quiz or total of membership fees eg. 13 × 5 + 35 (=100), 25 × 20 (=500)
			P1	for complete process to write (correct) figures as a ratio, eg 250 : 100 : 500 oe in any order (condone inclusion of units or words)
			A1	cao

Q3.

Question	Answer	Mark	Mark scheme	Additional guidance
	4 : 1 : 2	M1	for start to express the statements as a ratio eg 4 : 1, 1 : 4, 1 : 2 or 2 : 1 with clear and correct link to Azmol, Ryan, Kim	Allow any equivalent ratio, integers only May be seen as part of an incorrect answer.
			OR as algebraic expressions, two of $4x$, x and $2x$ eg $4x : x$, $1x : 4x$, $1x : 2x$ or $2x : 1x$ with clear and correct link to Azmol, Ryan, Kim	May be seen as integer multiples of these algebraic expressions. Any letter may be used.
		A1	4 : 1 : 2 oe	Accept 8 : 2 : 4 or equivalent ratios involving integers
		(SCB 1	3 integer numbers in correct ratio but no ratio notation, eg 4, 1, 2 or 20, 5, 10)	

Q4.

Question	Working	Answer	Mark	Notes
		Ali 80	M1	starts with a first step , e.g. 280 ÷ (2 + 5) (= 40)
		Beth 200	A1	cao

Q5.

Question	Answer	Mark	Mark scheme	Additional guidance
	2	P1	for a process to find the number of men, eg. (60 ÷ 2) ÷ 3 (= 10)	
	(supported)	P1	for a process to find the number of children, eg. 60 – "30" – "10" (= 20)	60 ÷ 3 = 20 scores no marks.
		P1	for a start of a process to find the value of n, eg. ("20" : "10") ÷ 5 or 20 : 10 = 10 : 5 or "20" ÷ "10"	Any ratio must come from correct processes to find the number of children and the number of men
		A1	for 2 with supportive working	Award 0 marks for 2 with no correct supportive working Award full marks for 2 : 1 given as final answer from correct supportive working

Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{9}{25}$	M1	for $\frac{n}{6+9+10}$ where n is an integer < 25	
		A1	for $\frac{9}{25}$	Or equivalent fraction

Q7.

Question	Working	Answer	Mark	Notes
		45	M1	for a correct first step eg $\frac{9}{7+4+9}$ $(=\frac{9}{20})$ **or** $\frac{100}{7+4+9}$ $(=5)$ **or** a full method for one of the other colours
			A1	cao

Q8.

Question	Answer	Mark	Mark scheme	Additional guidance
	168	P1	for working with ratio to find the amount for C or D eg. 1.5 × 2 (=3) or (A, B, C, D =) 2 , 7 , 3 , 3 oe **OR** for suitable expressions linking A with C or D, eg. A = x, C = 1.5x	
		P1	for "2 + 3 + 3 + 7" (=15) **OR** adds 4 suitable expressions, eg. "x + 3.5x + 1.5x + 1.5x" (= 7.5x)	
		P1	for a complete process to find the amount of money eg. 360 ÷ "15"× 7 **OR** 360 ÷ "7.5" × 3.5	
		A1	cao	

Q9.

Paper 1MA1: 2F			
Question	Working	Answer	Notes
		96	P1 a strategy to start to solve the problem eg. $18 \div (7-4)$ (= 6) P1 for completing the process of solution eg. "6" × (4 + 5 + 7) A1 cao

Q10.

Question	Working	Answer	Mark	Notes
		15	P1	strategy to start the problem, eg 8 : 20 and 20 : 5
			P1	process to solve the problem, eg $\frac{5}{33}\times 100$ or 24 : 60 : 15
			A1	cao

Q11.

Question	Answer	Mark	Mark scheme	Additional guidance
	18	P1	for 240 ÷ 10 (= 24) **or** 240 ÷ 8 (= 30)	Accept 3 + 7 for 10, 3 + 5 for 8
		P1	for 3 × "24" (= 72) **or** 7 × "24" (= 168) **or** 3 × "30" (= 90) **or** 5 × "30" (= 150)	
		P1	for 3 × "24" (= 72) **and** 3 × "30" (= 90) **or** 7 × "24" (= 168) **and** 5 × "30" (= 150)	
		A1	cao	

Q12.

Question	Answer	Mark	Mark scheme	Additional guidance
	612	P1	Alan: for 100 – 32 – 40 (= 28) or for finding "28"% of 400 eg 400 × 0.28 (=112)	
		P1	Beryl: for $1-\frac{3}{10}-\frac{1}{10}\left(=\frac{6}{10}=60\%\right)$ or for finding $"\frac{6}{10}"\times 500$ (=300)	
		P1	Charlie: for starting to use the ratio 3 : 4 eg 150 ÷ 3 (=50)	
		P1	for complete ratio process eg $"\frac{150}{3}"\times 4$ (=200)	
		A1	cao	Answers only (without working) award 0 marks.