Q	Answer	Mark	Comments
1	**Alternative method 1 – algebra based on Sunita's age**		
	5×3 or 15	M1	may be implied by their algebraic total of the three ages being divided by 3
	$x - 1$ or $2x$ or $4x - 1$	M1	oe expressions any letter throughout
	x + their $(x - 1)$ + their $2x$ = their 15 or $4x - 1$ = their 15	M1dep	oe equation eg $\frac{x+x-1+2x}{3} = 5$ dep on M1M1
	$(x =)$ 4	M1dep	correct solution to their equation if the solution has a decimal part allow truncation or rounding to the nearest whole number
	8	A1	
	Alternative method 2 – algebra based on Joel's age		
	5×3 or 15	M1	may be implied by their algebraic total of the three ages being divided by 3
	$\frac{y}{2}$ or $\frac{y}{2} - 1$ or $2y - 1$	M1	oe expressions any letter throughout $2y - 1$ must not come from $y + y - 1$
	y + their $\frac{y}{2}$ + their $(\frac{y}{2} - 1)$ = their 15	M1dep	oe equation eg $\frac{y+\frac{y}{2}+\frac{y}{2}-1}{3} = 5$ dep on M1M1
	$2y$ + their y + their $(y - 2) = 2 \times$ their 15 or $4y - 2 = 30$ or $2y - 1 = 15$	M1dep	their equation with no denominator
	8	A1	

1 cont	**Alternative method 3 – trial and improvement**		
	5×3 or 15	M1	may be implied by their total of the three ages being divided by 3
	Trial of three numbers which fit the criteria, with either their sum correctly evaluated or their sum divided by 3	M1	eg $2 + 1 + 4 = 7$ or $(2 + 1 + 4) \div 3$ condone missing brackets
	Second trial of three numbers which fit the criteria, with either their sum correctly evaluated or their sum divided by 3	M1dep	dep on previous M1 eg $3 + 2 + 6 = 11$ or $(3 + 2 + 6) \div 3$ condone missing brackets
	4, 3 and 8 selected as their final combination	M1dep	any order implies M4
	8	A1	
	Additional Guidance		
	Up to M4 may be awarded for correct work seen in multiple attempts even if not subsequently used		
	Correct expressions, but the sum of the three ages is equated to 5 eg $4x - 1 = 5$		M0M1M0M0A0
	In alt 1, the correct value of x or the correct age for Joel for their two terms for Beth and Joel, with one correct, implies the first 4 marks eg x and $x + 1$ and $2x$, with $x = 3.5$ or answer 7		M1M1M1M1A0
	In alt 2, the correct value of y for their two terms for Sunita and Beth, with one correct, implies the first 4 marks eg y and $\frac{y}{2}$ and $(\frac{y}{2} + 1)$, with $y = 7$ or answer 7		M1M1M1M1A0
	In alt 1 and alt 2, condone missing brackets in equations if not recovered for up to M1M1M1 eg $x + x - 1 + 2x \div 3 = 5$ not recovered		M1M1M1M0A0

Q	Answer	Mark	Comments
2	$a = -3$	B1	
	8 or (their $-3)^2 - 1$ correctly evaluated	B1ft	
	4 or their $8 \div 2$ correctly evaluated	B1ft	
	Additional Guidance		
	$a = -3$ $b = -10$ $c = -5$		B1B0B1ft