Question Number	Scheme	Marks
1 (a)	$nax = \pm 4x$ OR $\frac{n(n-1)(ax)^2}{2} = \frac{24}{5}x^2$	M1
	$na = -4$ AND $\frac{n(n-1)a^2}{2} = \frac{24}{5}$	A1
	Sub $a = \frac{-4}{n} \Rightarrow \frac{n(n-1)16}{2n^2} = \frac{24}{5} \Rightarrow 80(n-1) = 48n \Rightarrow n = ...$	dM1, A1, A1
	$a = -\frac{8}{5}, n = \frac{5}{2}$	**(5)**
(b)	$p = \frac{"\frac{5}{2}"\left("\frac{5}{2}"-1\right)\left("\frac{5}{2}"-2\right)\times\left("-\frac{8}{5}"\right)^3}{6} = -\frac{32}{25}$	M1, A1
		(2)
(c)	Allow $\lvert x\rvert < \frac{5}{8}$ OR $\lvert x\rvert$„ $\frac{5}{8}$ or equivalents such as $-\frac{5}{8} < x < \frac{5}{8}$	B1ft
		(1)
		(8 marks)

(a)

M1: For $nax = \pm 4x$ OR $\frac{n(n-1)(ax)^2}{2} = \pm\frac{24}{5}x^2$ which may be implied. Condone missing brackets.

Allow the method mark to be scored for

- non-simplified versions such as $\binom{n}{1}ax = \pm 4x$ or ${}^nC_2(ax)^2 == \frac{24}{5}x^2$
- simplified versions (with x's cancelled) such as $na = -4$ or $\frac{n(n-1)a^2}{2} = \frac{24}{5}$

A1: Correct equations not involving x's (and not in combination notation form)

Scored for both $na = -4$ AND $\frac{n(n-1)a^2}{2} = \frac{24}{5}$ o.e.

dM1: Solves two equations of the correct form and proceeds to find a value for either a or n.

Expect to see the following

- 'simplified' initial equations of the form $na = \pm 4$ and $\frac{n(n-1)a^2}{2} = \pm\frac{24}{5}$
- a simplified intermediate equation in a single variable. Look, for example, for equations of the form $80(n-1) = 48n$ or $-2(-4-a) = \frac{24}{5}$ that are easily solvable. Condone slips
- followed by a value for either a or n.

A1: Either $a = -\frac{8}{5}$ or $n = \frac{5}{2}$ following two correct equations which may be in an un-simplified form

Allow equivalent fractions or decimals