Section B

8	123.3 to 124	W3	M1 sub in cosine rule (if rearranged condone 1 sign error) Or M2 -.55… SC2 56 to 56.7
		{3}	
9(a)	½ (2x + x +5) x o.e.	W1	
(b)	½ (3x + 5)x = 20 3x^2 + 5x = 40	M1 A1	or ½(3x^2+5x) or their(a) = 20
(c)	Sub. a=3, b=5, c=-40 (-5 + √505)/6 2.9	M1 M1 A1	condone one error (W3 2.9 only)
		{6}	
10(a)	6018(. …)	W2	M1 (×) 0.94^5 A1 6018 or 6020
(b)	2014 or 2013	W2	M1 × 0.94^{12} or 0.94^{11} or 3902/3 or 4151/2 or 11 or12 seen
		{4}	
11(a)	PO common QO = RO radii <PQO = <PRO =90 tangent and radius meet at 90 Congruent RHS	W2 W1 W1	for 3 conditions for 2 conditions Or alternative SSS / SAS
(b)	$\frac{x}{2}$ –90 o.e	W3	M1 <QPO = 180 – 90-their <QOP) or <QPR = 360 –90-90-their <QOR and M1 <QOP = 360 –x
		{6}	
12	$\frac{x^2+2x+12}{(x-1)(x+4)}$	W3	M2 x^2 +2x+12 or M1 $x(x-1)+3(x+4)$ and/or M1 denom.$(x-1)(x+4)$
		{3}	
13	144 to 145	W3	M1 π×4×9.2 or 115-116 M1 π×6×13.8 or 260(. …) SC1 288 to 290
		{3}	
Total Section B		**25**	