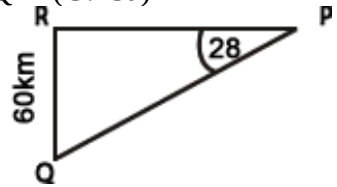
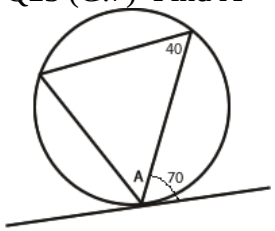
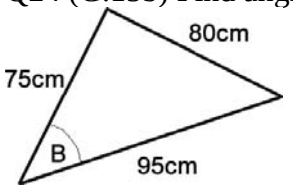
Name _____ **Methods 2 Higher basic skills sheet 3**

Section A: Number		Section B: Algebra		Section C: Geometry	
Q1 (N.4) Round 0.014609 to 3.s.f	**0.0146**	Q11 (A.2a) expand and simplify $3(2-3a)-7(a-1)$	**13-16a**	Q21 (G.18) what is the perimeter of a sector with angle 100° and radius 5cm (1.d.p)	$\frac{25}{9}\pi+10=18.7$
Q2 (N.5) Find the HCF of 84 & 60	**12**	Q12 (A.2a) factorise $fy^2 + f^2y$	**fy(f+y)**		
Q3 (N.6) Write 72 as a product of prime factors in index form.	**2^3x3^2**	Q13 (A.2d) factorise $4a^2 - 16$	**(2a+4)(2a-4)**	Q22 (G.15a)  Find PQ	**127.8km**
Q4 (N.7) if the number of students at a school decreased from 780 to 725 what is the percentage decrease?	**7%**	Q14 (A.2b) expand $(2x-1)(4x+3)$	**$8x^2+2x-3$**		
Q5 (N.5) Find 3 consecutive primes that add to 83.	**23,29,31**	Q15 (A.3) solve $5(x+4) = 3x - 25$	**-22.5**	Q23 (G.7) Find A 	**70**
Q6 Q7 (N8) if M splits a line AB in a ratio of 3:5 and N splits AB so that it is ¾ of the way along what fraction of AB is MN?	**$^3/_8$**	Q16 (A.4c) solve to 1dp $2x^2 + 6x - 5 = 0$	**0.7 & -3.7**		
Q7 (N.6) if $A=2\times3\times7^2$ and $B = 2^2\times3^2\times7$ what is LCM of A & B	**$2^2x3^2x7^2$ or 1764**	Q17 (A.5) write down the first 4 terms of the sequence $5-x^2$	**4, 1, -4, -11**	Q24 (G.15b) Find angle B 	**54.6**
Q8 (N9) If the weight of a bar of soap decreases by 12% each day how much of a 200g bar will be left at the end of a week?	**81.7g**	Q18 (A.6) work out the nth term of the sequence 20, 24, 30, 38, 48, …	**n^2+n+18**		
Q9 (N.10) if $a=\frac{\sin^{-1}(\cos 65)}{3\tan(45)}$ Find a to 3.s.f	**8.33**	Q19 (A.8) what is the missing co-ord to make a parallelogram (3,1) (8,1) (6,4) (x, y)	**(1,4) or (11,3) or (5,-2)**	Q25 (G12) OA = a and OB = b and AM:MB is in ratio 3:2 Find OM in terms of a and b	$\frac{2}{5}\underset{\sim}{a}+\frac{3}{5}\underset{\sim}{b}$
Q10 (G21) Calculate the worth of a sphere of gold radius 6cm if 1 cm^3 is worth £32	**£28,953**	Q20 (A.2e) Simplify $\frac{x^2+5x+4}{3x+3}$	$\frac{x+4}{3}$		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	