Centre No.			Pape	er Refer	ence			Surname	Initia	ul(s)
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paper.	I							8	9	
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nstructions to Candidates									11	
n the boxes above, write your	centre number	, cand	idate 1	numbe	r, you	r surn	ame, i	initial(s) and	12	
heck that you have the correct	et question pap	er.		C 11		.1			13	
f you need more space to com	plete your ans	n in th wer to	e spac any q	uestio	n, use	additi	iestional a	n. answer sheets.	14	
nformation for Candidate	<b>N</b> G								15	
The marks for individual quest Full marks may be obtained fo There are 27 questions in this of There are 16 pages in this questions	ions and the part r answers to A question paper. Stion paper. Ar	arts of LL qu The ny blan	quest estion total n nk pag	ions an s. nark fo ges are	re sho or this indica	wn in paper ated.	round <sup>•</sup> is 10	l brackets: e.g. <b>(2)</b> . 0.	16	
Advice to Candidates										
Write your answers neatly and	legibly.									
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This publication may be reproduced only in accordance	with									I











8.	Leave
• •	
A B	
A and B are two points, shown above. Construct the locus of points which are e from A and B.	quidistant
(Total	2 marks)
9. Find the inverse function $f^{-1}$ of $f: x \mapsto 4x + 1$ .	
Answer $f^{-1}: x \mapsto \dots$	
(Total	2 marks)
	radius of ht, in cm,
10. A cylinder has a radius of 5 cm and height 15 cm. A second cylinder has a 10 cm. Given that the two cylinders have the same volume, calculate the heig of the second cylinder.	
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10. A cylinder has a radius of 5 cm and height 15 cm. A second cylinder has a 10 cm. Given that the two cylinders have the same volume, calculate the heig of the second cylinder. Answer	cm <b>Q10</b>

		Leave
11. (a) Find the exact value of $20.1 \times 32.42 + \frac{31.6}{1.6}$ .		
1.0	(1)	
(b) Write down your answer to part (a) in standard form.	(1)	
(c) Write down your answer to part (a) to 4 significant figures.		
	(1)	
Answers (a)		
(b)		
(c)		Q11
(Total 3 n	narks)	
Answer		Q12

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17. Solve the inequalities $3-x < 2x+7 \le 10-x$ .	Le
Answer	Q1
(Total 4 marks)	
<ol> <li>After tax was deducted, a salesman received £100 in wages. Given that the rate of tax was 22%,</li> </ol>	
(a) calculate, to the nearest p, the salesman's pay before tax was deducted. (2)	
A mistake had been made in paying the salesman. The rate of tax deduction should have been 40%.	
(b) Calculate, to the nearest p, how much the salesman should have been paid. (2)	
Answers (a) £	
(b) £	Q1
(Total 4 marks)	



**Turn over** 





Score	1	2	3	4	5	6
Frequency	4	8	10	9	6	3
a) Write dowr	n the mediar	n of the distr	ribution of th	e scores.		(1)
b) Write dowr	n an estimate	e for the pro	bability of o	btaining a so	core of 3.	(1)
The die is to be	thrown twi	ce. Find an	estimate for	the probabi	lity of	
(c) obtaining a	2 followed	by a 6,				(2)
d) obtaining a	2 and a 6 in	n any order.				(2)
				Answers (a)	)	
				(b)		
				(c)		
				(d)		

## $| \underbrace{1}_{N} \underbrace{1}_{N} \underbrace{1}_{2} \underbrace{1}_{4} \underbrace{1}_{4} \underbrace{1}_{5} \underbrace{1}_{6} \underbrace{1}_{4} \underbrace{1}_{4} \underbrace{1}_{5} \underbrace{1}_{6} \underbrace{1}_{4} \underbrace{1}_{4} \underbrace{1}_{6} \underbrace{1}_{1} \underbrace{1}_{4} \underbrace{1}_{4} \underbrace{1}_{6} \underbrace{1}_{6} \underbrace{1}_{4} \underbrace{1}_{6} \underbrace{1}_{6}$

<ul> <li>A bullet was fired vertically upwards from a rifle. The height risen by the bullet, x metres, in a time t seconds after being fired, is given by x = 50t - 5t<sup>2</sup>.</li> <li>(a) Calculate the speed, in m/s, of the bullet 4 seconds after it was fired. (3)</li> <li>(b) Calculate the greatest height, in metres, risen by the bullet. (3)</li> </ul>	
<ul> <li>x = 50t-5t<sup>2</sup>.</li> <li>(a) Calculate the speed, in m/s, of the bullet 4 seconds after it was fired.</li> <li>(3)</li> <li>(b) Calculate the greatest height, in metres, risen by the bullet.</li> <li>(3)</li> </ul>	
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(b) Calculate the greatest height, in metres, risen by the bullet. (3)	
	1
Angwarg (a) m/g	
(b) m	
(Total 6 marks)	024
	Q24

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