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wjec cbac	3300U60-1 S17-3300U60-1							
	MATHEMATICS UNIT 2: CALCULATOR-ALLOWE HIGHER TIER	MATHEMATICS UNIT 2: CALCULATOR-ALLOWED HIGHER TIER						
	TUESDAY, 20 JUNE 2017 – AFTE	RN	OON					
	1 hour 45 minutes		For Ex	aminer's	use only			
		Qı	uestion	Maximur Mark	n Mark Awarded			
ADDITIONAL N	IATERIALS		1.	4				
A calculator will	be required for this paper.		2.	5				
A ruler, a protrac	ctor and a pair of compasses may be required.		3.	4				
NSTRUCTION	S TO CANDIDATES		4.	3				
Jse black ink o	r black ball-point pen. Do not use gel pen or		5.	3				
correction fluid.	· ····· ···· ···· ···· ··· ··· ··· ···		6.	3				
You may use a	pencil for graphs and diagrams only.		7.	5				
the spaces at the	e top of this page.		8.	5				
Answer <b>all</b> the o	questions in the spaces provided.		9.	2				
f you run out o	f snace use the continuation nace(s) at the							

If you run out of space, use the continuation page(s) at the back of the booklet, taking care to number the question(s) correctly.

Take  $\pi$  as 3.14 or use the  $\pi$  button on your calculator.

## **INFORMATION FOR CANDIDATES**

You should give details of your method of solution when appropriate.

Unless stated, diagrams are not drawn to scale.

Scale drawing solutions will not be acceptable where you are asked to calculate.

The number of marks is given in brackets at the end of each question or part-question.

In question 11, the assessment will take into account the quality of your linguistic and mathematical organisation, communication and accuracy in writing.



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PMT

3300U601 01





per annum as a decimal and n is the number of compounding periods per annum.



3300U601 03







-	A solution to the equation	Exam
	$x^3 - 2x - 45 = 0$	
	lies between 3 and 4.	
	Use the method of trial and improvement to find this solution correct to 1 decimal place. You must show all your working. [4	.]







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Construct an accurate drawing of triangle <i>ABC</i> , where <i>AB</i> = 7 cm, $ABC$ = 90° and $BAC$ = 60°. Use only a ruler and a pair of compasses.	only
The side <i>AB</i> has been drawn for you.	-
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	'   -
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A B	-
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7 Examiner only Calculate the length of the side QR in the triangle PQR shown below. 6. [3] R 24° Q P-18 cm Diagram not drawn to scale . . . . 3300U601 07







3300U601 09

	(C)	If a large number you expect to ch Circle your answ	er of people playe noose a white ba ver.	ed the game, app ll?	roximately what f	raction of them	would [1]
		<u>1</u> 10	<u>1</u> 5	$\frac{1}{4}$	$\frac{1}{3}$	<u>1</u> 2	
8.	(a)	Factorise x <sup>3</sup> –	5 <i>x</i> .				[1]
	(b)	Expand and sim	nplify $(2x - 3)(x - 3)$	+ 4).			[2]
	(c)	Factorise $x^2 - 3$	3x - 28.				[2]





11 Examiner only **10.** Points *A*, *B* and *C* lie on the circumference of a circle, centre *O*.  $A\hat{C}B = 37^{\circ}.$ С 37° 0 В Diagram not drawn to scale 3300U601 11 Calculate the size of the **reflex** angle AOB. [2] 



11

In this question, you will be assessed on the quality of your organis accuracy in writing.	sation, communication and
The area of triangle ABD, shown in the diagram below, is 35 cm <sup>2</sup> .	
AD = 5  cm and $BC = 32  cm$ .	
D is on the line AC, and BD is perpendicular to AC.	
С	
$\wedge$	
/ \32 cm	
5 cm /	
$35 \mathrm{cm}^2$ x	
A	
Diagram not drawn to scale	
Calculate the size of angle <i>x</i> .	
Calculate the size of angle <i>x</i> . You must show all your working.	[5 + 2 OCW]
Calculate the size of angle <i>x</i> . You must show all your working.	[5 + 2 OCW]
Calculate the size of angle <i>x</i> . You must show all your working.	[5 + 2 OCW]
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Calculate the size of angle x. You must show all your working.	[5 + 2 OCW]
Calculate the size of angle <i>x</i> . You must show all your working.	[5 + 2 OCW]
Calculate the size of angle <i>x</i> . You must show all your working.	[5 + 2 OCW]



Make $c$ the subjective vertices	ect of the following	formula.	
Give your answe	r in its simplest for	rm.	[5]
		$c-5 = \frac{3c-7}{d}$	
		ű	









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	Day	Probability of rain	
-	Monday	80%	
-	Tuesdav	80%	
-	Wednesday	80%	
or these three o	days,		
a) calculate t	the probability that it will rai	n on all three days.	[2]
<i>b)</i> calculate t	the probability that it will rain	n on exactly 2 consecutive days.	[3]
<i>b)</i> calculate t	the probability that it will rain	n on exactly 2 consecutive days.	[3]
b) calculate t	the probability that it will rain	n on exactly 2 consecutive days.	[3]
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b) calculate t	the probability that it will rain	n on exactly 2 consecutive days.	[3]



Examiner

18	
$w^{-\frac{3}{5}}$ .	
$-\left(\sqrt[5]{w}\right)^3$	

Γ

						[, ]
-	$-\left(\sqrt[3]{w}\right)^5$	$-\frac{3}{5}w$	$-\left(\sqrt[5]{w}\right)^3$	$\frac{1}{\left(\sqrt[5]{w}\right)^3}$	$\frac{1}{\left(\sqrt[3]{w}\right)^5}$	
······						
Solve Give	e the equation your answers o	$x = \frac{7}{5x - 3}.$ correct to 2 deci	imal places.			[5]
······						
······						
······						

		[1
	Number =	Square of the number =
(b)	Find two <b>different</b> irration Complete the calculation	nal numbers to make the answer to the calculation below rationa by filling in the three boxes. [1
		× _ = _













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Question number	Additional page, if required. Write the question number(s) in the left-hand margin.	Examine only

