1.	What is th	ne value	$e  ext{ of } 1 - 0.2$	+ 0.03	- 0	.004?					
	A 0.826		В 0.834		$\mathbf{C}$	0.926	I	1.226		E 1.234	1
2.	Last year, Australian Suzy Walsham won the annual women's race up the 1576 steps of the Empire State Building in New York for a record fifth time. Her winning time was 11 minu 57 seconds. Approximately how many steps did she climb per minute?										
	A 13		B 20		C 8	30	Ι	100		E 130	
3.	What is a	half of	a third, plus	s a third	of a c	quarter, p	olus a q	uarter of a	i fifth?		
	A $\frac{1}{1440}$		B $\frac{3}{38}$		$C_{\overline{3}}$	1 30	Γ	$\frac{1}{3}$		$E \frac{3}{10}$	
4.	The diagram shows a regular pentagon inside a square.										
	What is the value of $x$ ?										x°
	A 48	B 51	C 54	D 60	E	E 72					
5.	Which of	the foll	owing num	bers is n	ot a s	quare?					
	A 1 <sup>6</sup>		B 2 <sup>5</sup>			_	Ι	<b>4</b> <sup>3</sup>		$E   5^2$	
6.	the same	length.	iangle and i	_				•			$\left\langle \ \right\rangle$
	A 5:6		B 4:5		C 3			2:3		E 1:1	
7.	are triang. What is the vertices of	les. 1e prodi	a solid figur act of the nu rahedron? C 12		edge		·		,		
	1. 0	2 10	Ü 12	2 10						1	
8.	How man	y two-d	igit squares	differ b	y 1 fi	rom a m	ultiple c	of 10?			
	A 1		B 2		C 3		Ε	<b>)</b> 4		E 5	
9.	What is the		of p + q	r + s	+ <i>t</i>	+ u + 1	) + W -	+x+y	$\sqrt{p^{\circ}}$	$q^{\circ}$	r° s°
	A 540	<b>B</b> 720	C 900	D 108	80 E	E 1440			<i>y</i>	$x^{\circ}$	$\frac{\int_{v^{\circ}}^{t^{\circ}} u^{\circ}}{u^{\circ}}$
10.	What is th	ie remai	inder when	$2^2 \times 3^3$	× 5 <sup>5</sup>	$5 \times 7^7 $ is	divideo	l by 8?			

D 5

E 7

C 4

A 2

В 3

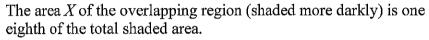
11.	Three different positive integers have a mean of 7. What is the largest positive integer that could be one of them?									
	A 15	B 16	C 17	D	18	E 19				
12.	An ant is on the The ant moves an adjacent sq How many of black?									
	A 0 B 2	2 C 4	D 6 E	8						
13.	What is the arregion in the r	ea of the shade ectangle?	d 3	cm	— 14 cm					
	A 21 cm <sup>2</sup> B	22 cm <sup>2</sup> C 23	cm <sup>2</sup> D 24 cm	<sup>2</sup> E more inf		ed				
14.	A 21 cm <sup>2</sup> B 22 cm <sup>2</sup> C 23 cm <sup>2</sup> D 24 cm <sup>2</sup> E more information needed  In a sequence, each term after the first two terms is the mean of all the terms which come before that term. The first term is 8 and the tenth term is 26. What is the second term?									
	A 17	B 18	C 44	D	52	E 68				
15.	A flag is in the shape of a right-angled triangle, as shown, with the horizontal and vertical sides being of length 72 cm and 24 cm respectively.  The flag is divided into 6 vertical stripes of equal width.  What, in cm², is the difference between the areas of any two adjacent stripes?									
	A 96	В 72	C 48	D	32	E 24				
16.	You are asked to choose two positive integers, $m$ and $n$ with $m > n$ , so that as many as possible of the expressions $m + n$ , $m - n$ , $m \times n$ and $m \div n$ have values that are prime. When you do this correctly, how many of these four expressions have values that are prime?									
	A 0	B 1	C 2	D	3	E 4				
17.	The football shown is made by sewing together 12 black pentagonal panels and 20 white hexagonal panels. There is a join wherever two panels meet along an edge.  How many joins are there?  A 20 B 32 C 60 D 90 E 180									
18.	The total weight of a box, 20 plates and 30 cups is 4.8 kg. The total weight of the box, 40 plates and 50 cups is 8.4 kg. What is the total weight of the box, 10 plates and 20 cups?									
	A 3 kg	B 3.2 kg	C 3.6	•	4 kg	E 4.2 kg				

The figure shows four smaller squares in the corners of a large square. The smaller squares have sides of length 1 cm, 2 cm, 3 cm and 4 cm (in anticlockwise order) and the sides of the large square have length 11 cm.



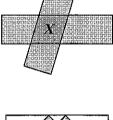
What is the area of the shaded quadrilateral?

- $A 35 cm^2$
- B 36 cm<sup>2</sup>
- $C = 37 \text{ cm}^2$
- D 38 cm<sup>2</sup>
- E 39 cm<sup>2</sup>
- A voucher code is made up of four characters. The first is a letter: V, X or P. The second and third are different digits. The fourth is the units digit of the sum of the second and third digits. How many different voucher codes like this are there?
  - A 180
- B 243
- D 300
- E 2700
- A rectangle is placed obliquely on top of an identical rectangle, as 21. shown.



What fraction of the area of one rectangle is X?

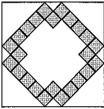
- A  $\frac{1}{3}$  B  $\frac{2}{7}$  C  $\frac{1}{4}$  D  $\frac{2}{9}$  E  $\frac{1}{5}$



The diagram shows a shaded region inside a large square. The shaded region is divided into small squares.

What fraction of the area of the large square is shaded?

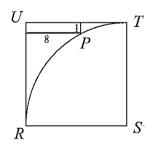
- A  $\frac{3}{10}$  B  $\frac{1}{3}$  C  $\frac{3}{8}$  D  $\frac{2}{5}$  E  $\frac{3}{7}$



- There are 120 different ways of arranging the letters, U, K, M, I and C. All of these arrangements are listed in dictionary order, starting with CIKMU. Which position in the list does UKIMC occupy?
  - A 110 th
- B 112 th
- C 114 th
- D 116 th
- E 118 th
- In square RSTU a quarter-circle arc with centre S is drawn from Tto R. A point P on this arc is 1 unit from TU and 8 units from RU. What is the length of the side of square RSTU?



- B 10
- C 11
- D 12
- E 13



25. A point is marked one quarter of the way along each side of a triangle, as shown.

> What fraction of the area of the triangle is shaded?

- A  $\frac{7}{16}$  B  $\frac{1}{2}$  C  $\frac{9}{16}$  D  $\frac{5}{8}$  E  $\frac{11}{16}$

