

**PAPER****C**

# 2017 MATHEMATICS

**DO NOT OPEN THIS BOOKLET  
UNTIL INSTRUCTED.**

**40 QUESTIONS**

**TIME ALLOWED: 45 MINUTES**

Mark only **ONE** answer for each question.

Your score will be the number of correct answers.

Marks are **NOT** deducted for incorrect answers.

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There are **40 MULTIPLE-CHOICE QUESTIONS** (1–40).

Use the information provided to choose the **BEST** answer from the four possible options.

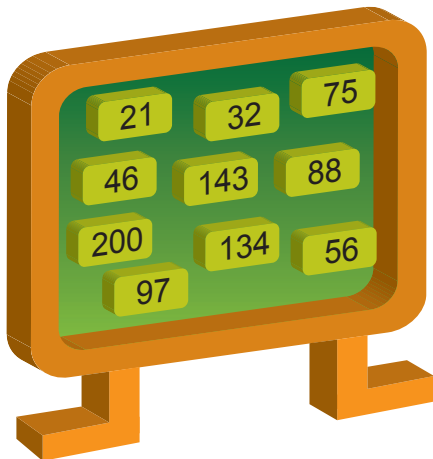
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You may use a ruler and spare paper.

You are **NOT** allowed to use a calculator.

STUDENT'S NAME:

1. Rosie has some tiles on a board.



Each tile has a number on it.

How many of these numbers are odd?

- (A) 4
- (B) 6
- (C) 8
- (D) 10

2. Cai wrote down a number pattern.

97

93

?

85

81

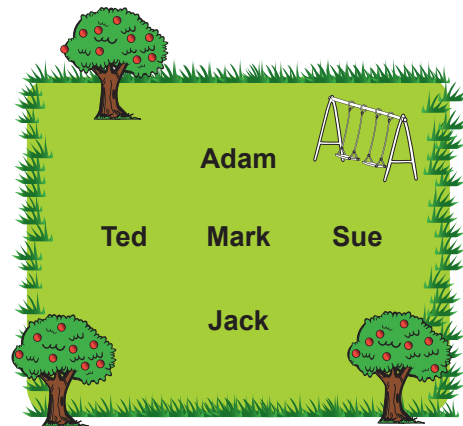
What number should ? be?

- (A) 87
- (B) 88
- (C) 89
- (D) 90

3. Which of these numbers has its largest digit in the tens column?

- (A) 135
- (B) 283
- (C) 356
- (D) 967

4. Five students are standing in a park.







Mark is facing Sue.

Who is standing behind Mark?

- (A) Ted
- (B) Sue
- (C) Jack
- (D) Adam

5. Kimi decided to start fishing at the morning high tide. She looked up the times for low tide and high tide that day.

**MONDAY 6 JUNE**

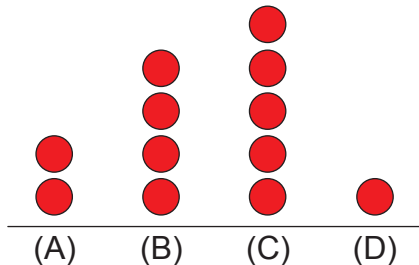
LOW 	3:10 am 0.18 m
HIGH 	9:01 am 1.30 m
LOW 	2:40 pm 0.33 m
HIGH 	9:30 pm 1.71 m

At what time should Kimi start fishing?

- (A) 3:10 am
- (B) 9:01 am
- (C) 2:40 pm
- (D) 9:30 pm

6. Lulu asked 12 friends what they had for lunch. She recorded the results as a dot plot. Two more friends had rice than salad.

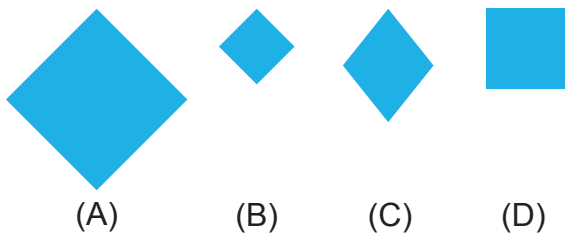
Which column shows the number of friends who had salad?



7. Toma had this card.



Which of these cards is identical to Toma's card?



8. Claire was checking her pulse. After 10 seconds she had counted 15 heart beats.

What was her pulse rate in beats per minute?

- (A) 25
- (B) 60
- (C) 90
- (D) 150

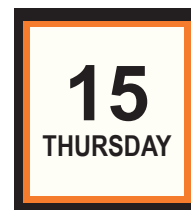
9. Which of these is almost certain to happen?

(A)



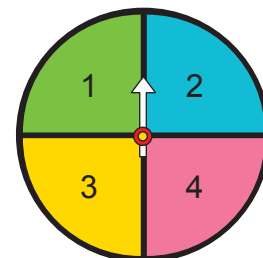
Jim tosses a coin and it lands on heads.

(B)



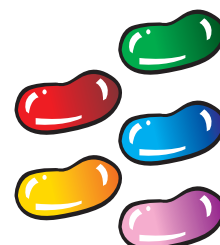
Sasi turns the page on the calendar and the next day is Friday.

(C)



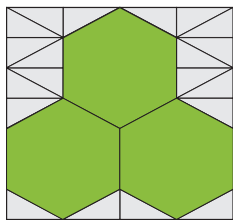
Mary flicks the spinner and it lands on 3.

(D)



Harry picks the green jellybean without looking.

10. Lani drew three hexagons on triangular grid paper and shaded them green.

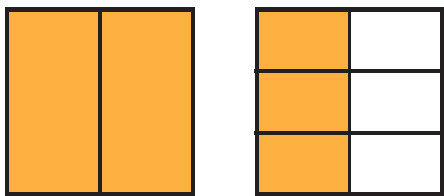


How many triangles did Lani shade?

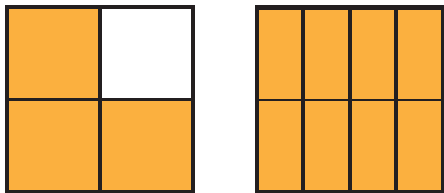
- (A) 18
- (B) 20
- (C) 30
- (D) 36

11. Which of these pictures shows  $1\frac{3}{4}$  shaded squares?

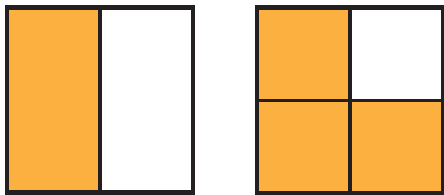
(A)



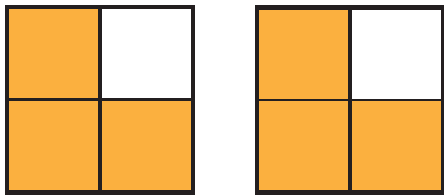
(B)



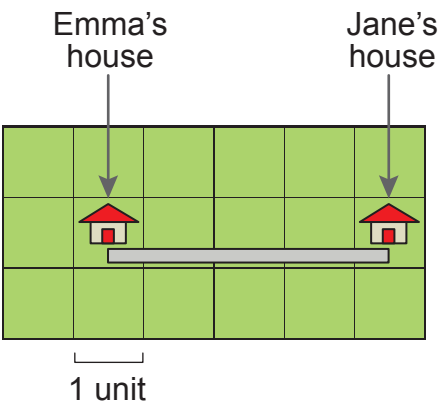
(C)



(D)



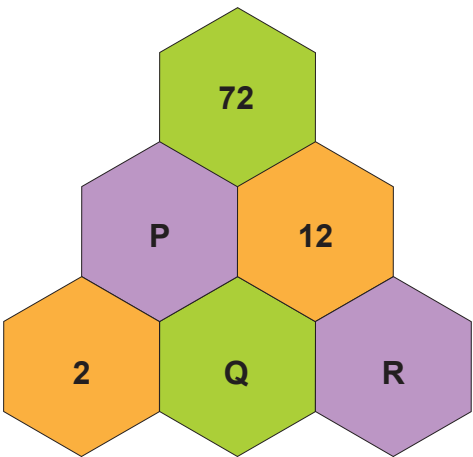
12. The entrance to Emma's house is 200 metres from the entrance to Jane's house as shown.



What does 1 unit on the map represent?

- (A) 20 metres
- (B) 25 metres
- (C) 40 metres
- (D) 50 metres

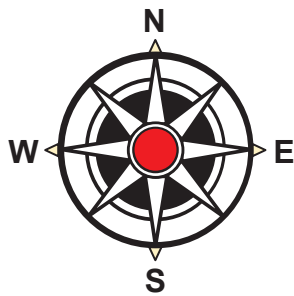
13. To obtain the number in each hexagon, Holly multiplied the numbers in the two hexagons directly below it.



What are the values of P, Q and R?

	P	Q	R
(A)	6	3	4
(B)	8	3	4
(C)	6	4	3
(D)	8	4	3

14. Gina had a compass.



Gina followed these directions in order:

- turn west and walk 10 metres
- turn north and walk 20 metres
- turn east and walk 40 metres
- turn south and walk 20 metres.

How far was Gina from her starting point?

- (A) 10 metres  
(B) 20 metres  
(C) 30 metres  
(D) 40 metres

15. Toby had a playlist with 6 songs.

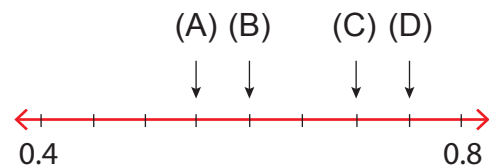
	Track	Time	
		minutes	seconds
▶	Song 1	2	30
▶	Song 2	1	50
▶	Song 3	2	50
▶	Song 4	1	40
▶	Song 5	4	20
▶	Song 6	7	10

He played the songs in order from the start of Song 1, without pausing.

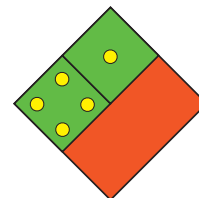
Which song was playing exactly 7 minutes after Toby started the playlist?

- (A) Song 3  
(B) Song 4  
(C) Song 5  
(D) Song 6

16. Where is 0.7 on this number line?

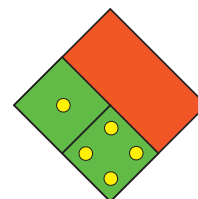


17. Janice drew this shape.

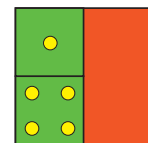


Janice rotated it anticlockwise by a quarter of a turn.

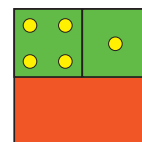
Which of these shows the shape after this rotation?



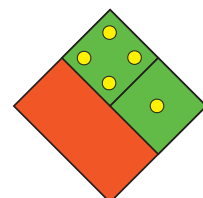
(A)



(B)



(C)



(D)

18. Which two numbers differ by 43?

- (A) 28 and 71  
(B) 38 and 71  
(C) 28 and 75  
(D) 38 and 75

19. There are 9 marbles in this bag.



**KEY**

B = blue  
G = green  
R = red  
Y = yellow

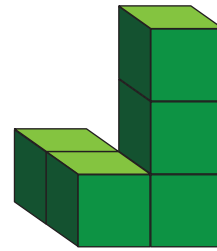
Tom took out a green marble leaving 8 marbles in the bag.

Then it was Julie's turn to take out a marble without looking.

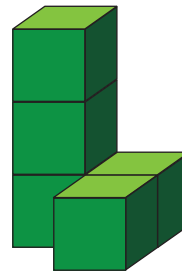
Which two colours does Julie have the same chance of taking out?

- (A) yellow and red
- (B) green and red
- (C) green and yellow
- (D) red and blue

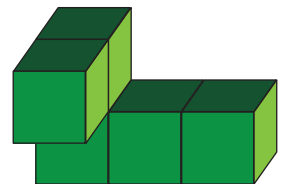
21. Lin made this solid using five cubes.



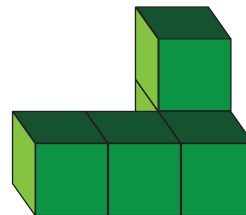
Which of these is **NOT** Lin's solid?



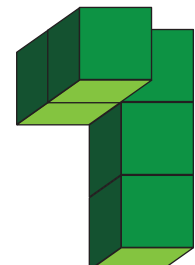
(A)



(B)

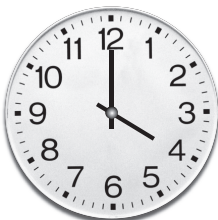


(C)



(D)

20. Jason noticed these clocks at the airport showing local times for the same day.



London  
am



Sydney  
pm

What is the time difference between London and Sydney?

- (A) 3 hours
- (B) 7 hours
- (C) 9 hours
- (D) 15 hours

22. Ardi, Priya and Raj took turns to paint their house. The house painting began at 7 am and finished at 11 pm without a break.

Priya painted for one-quarter of the time. Ardi painted for the same amount of time as Raj.

How long did Raj spend painting the house?

- (A) 12 hours
- (B) 6 hours
- (C) 4 hours
- (D) 3 hours

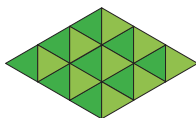
23. Emma is making a pattern of diamonds using small triangles.



**Shape 1**  
2 triangles



**Shape 2**  
8 triangles



**Shape 3**  
18 triangles

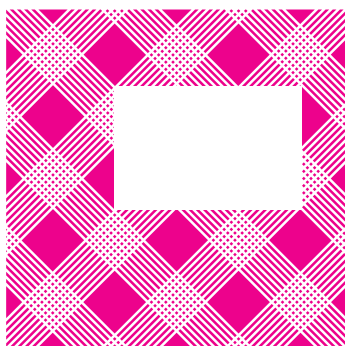


**Shape 4**

How many small triangles will she need to make the 4th shape in her pattern?

- (A) 32
- (B) 28
- (C) 25
- (D) 22

24. Lynne cut a piece out of this square.



Which of these is the cut-out piece?



(A)



(B)



(C)



(D)

25. There are 12 animal signs in the Chinese calendar. They repeat every 12 years in the same order. For example, people born in 1955 or 1967 were born in the 'Year of the Goat'.

1955



Year of  
the Goat

1956



Year of  
the Monkey

1957



Year of  
the Rooster

1958



Year of  
the Dog

Cai turned 35 on 20 April 2017.

In which 'Year' was he born?

- (A) Year of the Dog
- (B) Year of the Goat
- (C) Year of the Rooster
- (D) Year of the Monkey

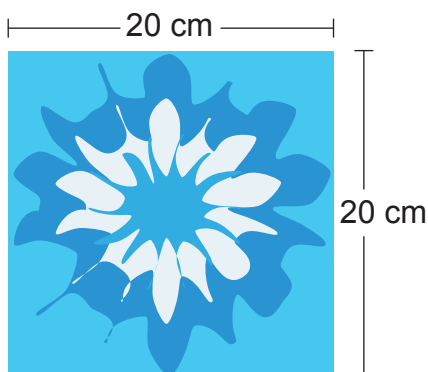
26. Freya left this note with the directions to her house.

Leave school, turn left onto McDonald Street and walk to the end. Turn right and walk 100 metres. Turn left and walk 100 metres then turn right and walk 100 metres. My house is the white one.

Which house is Freya's?



27. Josh wants to make a quilt for his bed using a number of these squares.



The rectangular quilt must cover his bed measuring 80 cm by 200 cm and have an extra 20 cm on all four sides.

How many squares does Josh need to make the quilt?

- (A) 40 (B) 44  
(C) 68 (D) 72

28. Fadi only had from 3:40 pm until 5:25 pm to see a movie with his friends.

This was the movie timetable.

**Return of the Snowman**

Length: 2 hours 10 minutes  
Showing 3:40 pm and 5:50 pm

**Flying Home**

Length: 1 hour 20 minutes  
Showing 3:20 pm and 4:05 pm

**Wally the Watchmaker**

Length: 1 hour 45 minutes  
Showing 3:30 pm and 5:20 pm

**The Secret Door**

Length: 1 hour 40 minutes  
Showing 3:50 pm and 4:55 pm

Fadi and his friends watched one complete movie together.

Which movie did they watch?

- (A) *Return of the Snowman*  
(B) *Flying Home*  
(C) *Wally the Watchmaker*  
(D) *The Secret Door*

29. Debbie used the digits 4, 7 and 8 to make 2-digit numbers. For example, 47 and 88 were two of the nine numbers that Debbie made.

How many of these 2-digit numbers are divisible by 3?

- (A) 1  
(B) 2  
(C) 3  
(D) 4



30.  $\star - 12 = \diamond$

$\diamond + \diamond + \diamond = \star + \star$

What is value of  $\star$  ?

- (A) 18
- (B) 24
- (C) 30
- (D) 36

31. There are 24 students in Mr Sim's class.

Four students play two sports. All other students play only one sport.

Mr Sim is making a table to show the number of students who play each sport.

Sport	Number
Tennis	
Soccer	8
Volleyball	5
Basketball	?

One-quarter of the students play tennis.

How many students in Mr Sim's class play basketball?

- (A) 9
- (B) 8
- (C) 6
- (D) 5

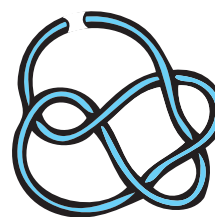
32. Dani is a baker.

She started with 1 gram of yeast. The amount of yeast doubled every 12 hours.

How much yeast was there after 48 hours?

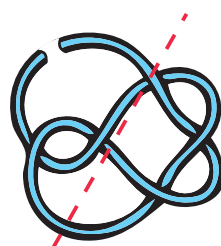
- (A) 4 grams
- (B) 8 grams
- (C) 16 grams
- (D) 24 grams

33. Aditya had this tangled piece of wool.

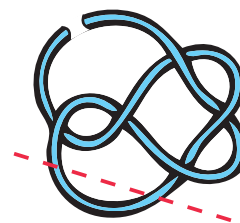


He cut the wool into 7 pieces using one straight cut.

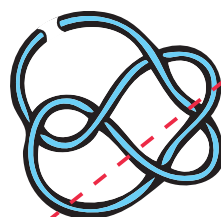
Which of the following diagrams shows the path Aditya took to cut the wool?



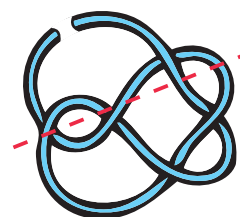
(A)



(B)



(C)



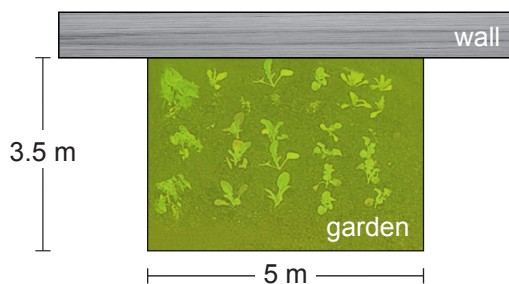
(D)

34.

$$\begin{array}{r} \triangle \star \\ \star 7 \\ + 1 \triangle \\ \hline 10 \star \end{array}$$

- (A)  $\triangle = 2$   $\star = 6$   
 (B)  $\triangle = 3$   $\star = 6$   
 (C)  $\triangle = 3$   $\star = 5$   
 (D)  $\triangle = 4$   $\star = 5$

35. Henry built a rectangular garden against a wall.



What length of fencing is needed to enclose the garden?

- (A) 8.5 metres  
 (B) 12 metres  
 (C) 17 metres  
 (D) 17.5 metres

36. Raj went shopping.

On Monday he spent half of his money.

On Tuesday he spent one-quarter of his remaining money.

He was left with \$18.

How much money did Raj begin with?

- (A) \$48  
 (B) \$72  
 (C) \$108  
 (D) \$144

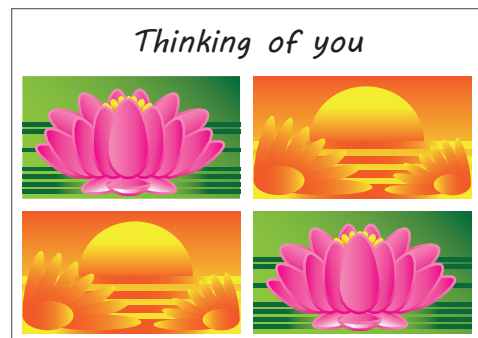
37. Carol is making greeting cards using these images.



Each image is

- placed the same way up
- put in one of four positions
- used twice in her design.

This is one possible greeting card.



How many different greeting cards can Carol make?

- (A) 4  
 (B) 6  
 (C) 8  
 (D) 12

38. Bill took part in a quiz.

There were three types of questions.

Question type	Points
knowledge	2
skill	5
application	7

Bill scored 39 points.

What is the maximum number of questions that Bill could have answered correctly?

- (A) 14
- (B) 17
- (C) 18
- (D) 19

39. There are 48 boxes of tissues in a carton.  
Inside each box are 100 tissues.

Each person, in an office of 50 people,  
uses an average of 3 tissues per day.

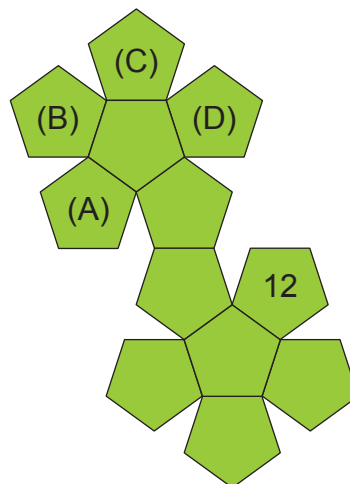
How long would it take these 50 people to  
use 9 cartons of tissues?

- (A) 32 days
- (B) 72 days
- (C) 210 days
- (D) 288 days

40. Lien folded this net to make a  
12-sided dice.

He placed it on the table so that  
12 was showing on top.

Which face was on the bottom?



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### THE FOLLOWING YEAR LEVELS SHOULD SIT THIS PAPER:

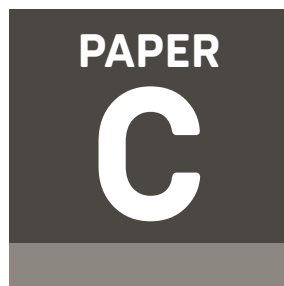
<b>Australia</b>	Year 5
<b>Brunei</b>	Primary 5
<b>Egypt</b>	Year 5
<b>Hong Kong</b>	Primary 5
<b>Indian Subcontinent<sup>1</sup></b>	Class 5
<b>Indonesia</b>	Year 6
<b>Malaysia</b>	Standard 5
<b>Middle East<sup>2</sup></b>	Class 5
<b>New Zealand/Pacific<sup>3</sup></b>	Year 6
<b>Singapore</b>	Primary 4
<b>Southern Africa<sup>4</sup></b>	Grade 5

<sup>1</sup> Indian Subcontinent Region: India, Sri Lanka, Nepal, Bhutan and Bangladesh.

<sup>2</sup> Middle East Region: United Arab Emirates, Qatar, Kuwait, Saudi Arabia, Bahrain, Oman, Turkey, Lebanon, Tunisia, Morocco, Libya, Algeria, Jordan and Pakistan.

<sup>3</sup> Pacific Region: Vanuatu, Papua New Guinea and Fiji.

<sup>4</sup> Southern Africa Region: South Africa, Botswana, Lesotho, Swaziland, Zimbabwe and Namibia.



# 2017 MATHEMATICS ANSWER KEYS



QUESTION NUMBER	PAPER A	PAPER B	PAPER C	PAPER D	PAPER E	PAPER F	PAPERS G & H	PAPERS I & J
1	C	B	A	D	C	A	B	B
2	D	D	C	C	A	A	D	C
3	C	C	B	A	A	D	A	C
4	B	B	A	A	D	B	B	B
5	B	D	B	B	B	C	C	D
6	A	A	A	D	A	B	C	A
7	B	B	D	C	C	C	A	B
8	D	A	C	A	C	D	D	B
9	C	C	B	C	B	A	D	A
10	D	B	D	C	A	B	C	A
11	D	C	B	B	D	C	B	C
12	A	A	D	B	D	D	D	B
13	A	D	A	D	B	C	B	A
14	C	A	C	A	B	D	A	D
15	A	B	A	B	D	B	C	B
16	B	D	C	A	C	A	A	C
17	D	B	A	C	C	D	B	D
18	A	C	A	C	D	B	A	A
19	B	D	B	D	C	D	C	B
20	A	C	C	A	A	A	D	C
21	B	B	B	B	B	C	D	A
22	B	B	B	D	A	A	B	B
23	C	A	A	D	D	A	C	C
24	D	C	B	C	A	B	C	D
25	A	D	A	B	C	D	D	B



# 2017 MATHEMATICS ANSWER KEYS



QUESTION NUMBER	PAPER A	PAPER B	PAPER C	PAPER D	PAPER E	PAPER F	PAPERS G & H	PAPERS I & J
26	C	A	C	B	D	B	A	B
27	D	C	D	A	B	A	B	D
28	B	A	B	C	A	C	C	D
29	D	B	D	B	D	D	D	A
30	B	C	D	A	C	C	A	C
31	A	A	A	D	A	C	B	C
32	C	B	C	D	B	B	A	D
33	A	D	D	B	B	D	D	A
34	C	C	C	C	C	B	A	D
35	D	D	B	B	D	A	C	C
36	B	A	A	756	128	135	257	700
37	D	C	B	31 43	13	284	56	81
38	A	B	C	92	414	230	14	30
39	D	C	D	28	21	32	59	49
40	C	B	B	18	32	33	81	240

