

The Wellington School Maths Challenge

Specimen Paper



Q1. Which of these expressions equals 2009 ?

A.
 $5^2 \times 80$

B.
 $6^2 \times 56$

C.
 $7^2 \times 41$

D.
 $8^2 \times 31$

E.
 $9^2 \times 29$

Q2. This month is November, which has 8 letters. What is the mean number of letters in the other eleven months? Remember to add all the numbers together and then divide by eleven.

A.
less than 6

B.
6

C.
between
6 and 7

D.
7

E.
more than 7

Q3. One of my factors is 3. I am not a multiple of 8. I am an even number. I am a square number. What number am I?

A.
12

B.
16

C.
36

D.
49

E.
64

Q4. I start with £200. I add 10% and then subtract 10% of this new value. How much do I have now?

A.
£198

B.
£199

C.
£200

D.
£201

E.
£202

Q5. Two sets of numbers are given. The second set of numbers is obtained by doing something to the first set.

$$\{1, 2, 3, 4, 5\} \Rightarrow \{2, 5, 10, ?, 26\}$$

What is the missing number?

- A.** 12 **B.** 17 **C.** 21 **D.** 37 **E.** 50

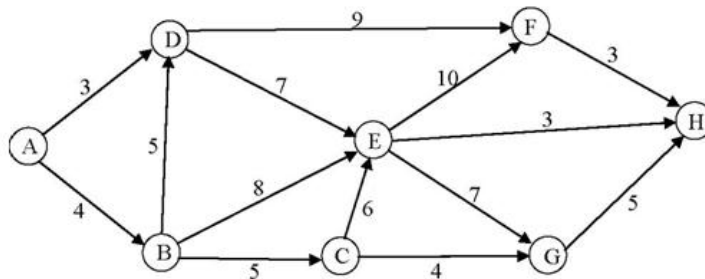
Q6. Caroline decided to add up all the numbers from 1 to 50. What total did she get?

- A.** 1275 **B.** 655 **C.** 765 **D.** 895 **E.** 1000

Q7. 15% of a number is 27. What is five ninths of the number?

- A.** 2.25 **B.** 4.05 **C.** 15 **D.** 100 **E.** 324

Q8. Mr Payne wants to get from A to H. What is the difference between the longest route and the shortest route that he can take?



- A.** 10 **B.** 12 **C.** 14 **D.** 16 **E.** 18

Q9. A cube has six faces. How many edges does it have?

A.
4

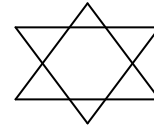
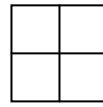
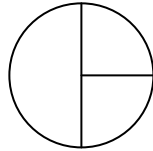
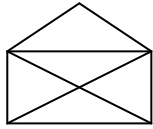
B.
6

C.
8

D.
10

E.
12

Q10. How many of these diagrams can be drawn without taking your pencil off the page and without going over a line more than once?



A.
none

B.
1

C.
2

D.
3

E.
all 4

Q11. If BOB is 19 and JANE is 30, who is 10 less than LIZ?

A.
AMY

B.
KATE

C.
JIM

D.
JOE

E.
SAM

Q12. Continue this sequence: 2×61 3×41 4×31 5×25 ...

A.
 6×22

B.
 7×18

C.
 8×16

D.
 9×13

E.
 10×12

Q13. How many different five digit numbers can be made using the digits 6 3 2 6 1 ?

- A.** 20 **B.** 30 **C.** 40 **D.** 60 **E.** 120

Q14. What number does ♦ stand for in the following multiplication?

$$\begin{array}{r} 2 \ \diamond \\ \times \quad \diamond \\ \hline 2 \ 2 \ 4 \end{array}$$

- A.** 9 **B.** 2 **C.** 8 **D.** 5 **E.** 6

Q15. An equable shape is one whose area has the same numerical value as its perimeter. For example, a square measuring 4 by 4 has area and perimeter equal to 16. Which of these rectangles is **not** equable?

- A.** 3 by 6 **B.** $2\frac{1}{3}$ by 14 **C.** $2\frac{1}{2}$ by 10 **D.** $2\frac{1}{4}$ by 18 **E.** $3\frac{1}{4}$ by $4\frac{1}{2}$

Q16. If it takes 16 days for 2 men to dig 4 holes, how long does it take for 4 men to dig 8 holes?

- A.** 2 days **B.** 4 days **C.** 8 days **D.** 16 days **E.** 32 days

Q17. My daughter is twice as old as my son and half as old as I am.
In twenty two years my son will be half my age. How old is my daughter?

- | | | | | |
|-----------|-----------|-----------|-----------|-----------|
| A. | B. | C. | D. | E. |
| 17 | 22 | 27 | 32 | 37 |

Q18. I am a 2 digit number.
When 2 is subtracted from me and the answer is doubled,
I am the same 2 digit number with my digits reversed.
What number am I?

- | | | | | |
|-----------|-----------|-----------|-----------|-----------|
| A. | B. | C. | D. | E. |
| 33 | 24 | 49 | 34 | 28 |

Q19. What is the mean of: $3x$, x , $2x-3$, $2x+7$

- | | | | | |
|-----------|-----------|-----------|-----------|-----------|
| A. | B. | C. | D. | E. |
| 3 | $x+2$ | $x+4$ | $2x+1$ | $2x+4$ |

Q20. Some cylinders have a radius of 2cm and are 6cm tall. How many of these cylinders will pack into a box measuring 24cm wide by 36cm long by 12cm tall?

- | | | | | |
|-----------|-----------|-----------|-----------|-----------|
| A. | B. | C. | D. | E. |
| 108 | 120 | 216 | 432 | 864 |

**The following five questions are not multiple choice.
Write your answers on the answer sheet in the spaces provided.**

Q21. What is the smallest number which is in the one times table, the two times table, the three times table, the four times table, the five times table and the six times table?

Q22. Which square number is one more than a cube number?

Q23. There are three numbers. When added together in pairs only, the sums come to 11, 17 and 22. What are the three numbers?

Q24. Only one number, when spelt out, has its letters in alphabetical order. What is this number?

Q25. $6! = 6 \times 5 \times 4 \times 3 \times 2 \times 1$ and $7! = 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$
Calculate the value of $10!$



Wellington School Specimen Paper

School Name _____

Pupils Names _____

In the spaces provided, write the one letter you think answers each question.
One mark will be awarded for each correct answer.

- | | | | | | | | |
|----|----|-----|----|-----|----|-----|----|
| 1. | __ | 6. | __ | 11. | __ | 16. | __ |
| 2. | __ | 7. | __ | 12. | __ | 17. | __ |
| 3. | __ | 8. | __ | 13. | __ | 18. | __ |
| 4. | __ | 9. | __ | 14. | __ | 19. | __ |
| 5. | __ | 10. | __ | 15. | __ | 20. | __ |

For the last five questions write your answers in the spaces provided.

21. |_____|
22. |_____|
23. |__| |__| |__|
24. |_____|
25. |_____|

**Specimen Paper
Answers**

Q1	C		
Q2	B		
Q3	C		
Q4	A		
Q5	B		
Q6	A		
Q7	D		
Q8	D		
Q9	E		
Q10	C		
Q11	B		
Q12	B		
Q13	D		
Q14	C		
Q15	E		
Q16	D		
Q17	B		
Q18	C		
Q19	D		
Q20	A		
Q21	60		
Q22	9		
Q23	3	8	14
Q24	forty		
Q25	3628800		