The Wellington School Maths Challenge

30 November 2013

Q1. Which of these calculations does <u>not</u> equal 2013?

A.	B.	C.	D.	E.
1×2013	3×671	33×61	11×183	31×63

Q2. In a game of snooker, potting each red ball is worth 1 point and the other coloured balls are worth:

Yellow = 2 points   Blue = 5 points
Green = 3 points   Pink = 6 points
Brown = 4 points   Black = 7 points

How many points do I score if I pot 7 red balls, 3 black balls, 2 pink balls, one green ball and a brown ball?

A.	B.	C.	D.	E.
47	48	49	50	51

Q3. Start with £3000.
Find 20% of this amount.
Now find 10% of the new amount.
Finally, find 5% of this new amount.
What is the answer?

A.	B.	C.	D.	E.
30p	60p	£3	£6	£30

Q4. Andy builds a 4 metre long fence using 13 wooden posts.
How many posts are needed to build a 12 metre long fence?

A.	B.	C.	D.	E.
36	37	38	39	40

Q5. Geoff adds together the number of vertices, edges and faces of a cube. The answer is 26.
Sam adds together the number of vertices, edges and faces of a square based pyramid. What is her answer?
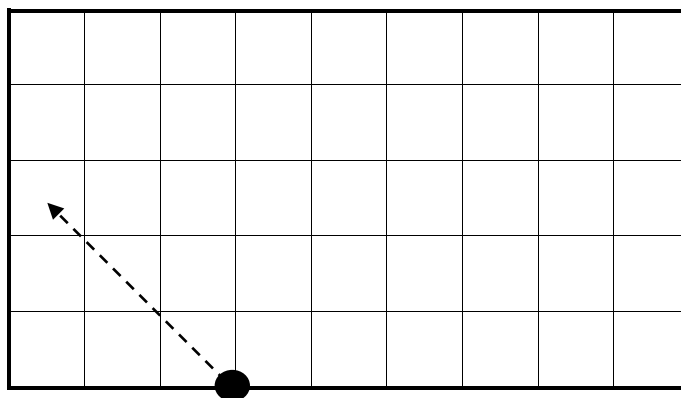
A.	**B.**	**C.**	**D.**	**E.**
14	15	16	17	18

Q6. $\sqrt{42436} =$

A.	**B.**	**C.**	**D.**	**E.**
204	206	214	216	21218

Q7. A film is 2 hours and 47 minutes long.
If it finishes at 2103 hours, when did it start?

A.	**B.**	**C.**	**D.**	**E.**
6.16pm	6.56pm	7.06pm	7.16pm	7.56pm

Q8. A ball bounces around this rectangle. Which corner does it meet first?

A.	**B.**	**C.**	**D.**	**E.**
Top Left	Top Right	Bottom Left	Bottom Right	None

Q9. Victoria buys 8 pencils costing 39p each and 9 pens costing 76p each. How much change does she get from £10?

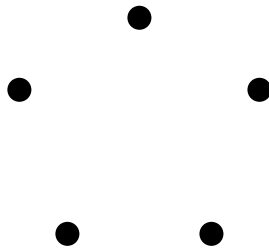| **A.**	**B.**	**C.**	**D.**	**E.**
none	4p	12p	13p	41p

Q10. One of the answers to these questions is different. Which one is the odd one out?

A.	**B.**	**C.**	**D.**	**E.**
$432 \div 24$	$486 \div 27$	$576 \div 32$	$608 \div 38$	$810 \div 45$

Q11. His Royal Highness Prince George of Cambridge was born on 22 July. How many days old is he today?

A.	**B.**	**C.**	**D.**	**E.**
130	131	132	133	134

Q12. Tom wants to draw a straight line joining two of the dots shown:

How many different lines could he draw?

A.	**B.**	**C.**	**D.**	**E.**
5	8	9	10	11

Q13. Fred is y years old. Gary is three years older than Fred. Harry is twice Fred's age. What is the sum of their ages?

A.	B.	C.	D.	E.
$2y+3$	$3y+6$	$3y+3$	$3y-3$	$4y+3$

Q14. 12 has 6 different factors: 1 , 2 , 3 , 4 , 6 , 12. How many different factors does 36 have?
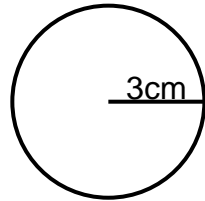
A.	B.	C.	D.	E.
6	8	9	10	12

Q15. $25-10\times 2^2 =$

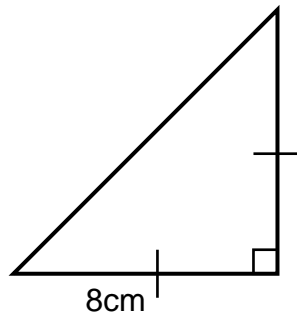| A.	B.	C.	D.	E.
-375	-15	25	60	900

Q16. When these shapes are placed in order of their areas, which is in the middle? The shapes shown are not the correct size.
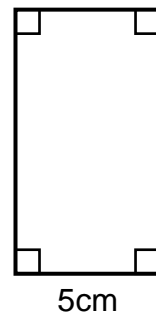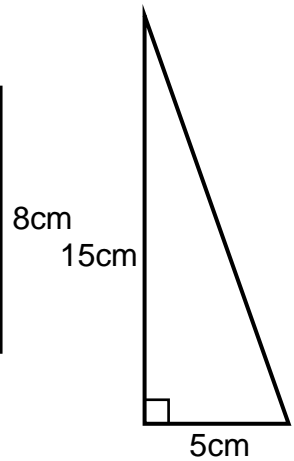
6cm

3cm

8cm

8cm   5cm

8cm
15cm

5cm
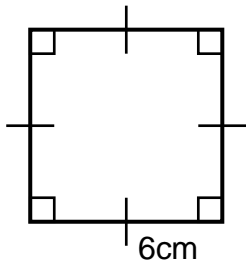
| A. | B. | C. | D. | E. |

Q17. How many of these statements are true?

- 100 is a square number
- 39 is a prime number
- $2^3 = 8$
- 36 is a multiple of 8

A.	B.	C.	D.	E.
none	one	two	three	all four

Q18. Two of the angles in a triangle are 35.5° and 44.4°.
What is the size of the third angle?

A.	B.	C.	D.	E.
99.1°	99.9°	100.1°	100.9°	180.1°

Q19. I start with £80. I add $\frac{3}{4}$ of this amount and then subtract $\frac{3}{4}$ of the new value. How much do I have now?

A.	B.	C.	D.	E.
£35	£60	£80	£105	£140

Q20. In this question A = 1, B = 2 and so on. This means that June = 50.
Which of these combinations is equal to April + August?

| A.	B.	C.	D.	E.
June + November	March + September	July + October	January + December	February + May

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

Q21. If I had four times as much money as I have now, my money would be as much over £1000 as the amount I have now is less than £1000. How much money do I have?

Q22. Andrew adds together four consecutive numbers: 6, 7, 8 and 9.
He gets the answer 30.
Norman multiplies four consecutive numbers.
He gets the answer 43680. What numbers did Norman use?

Q23. There are five different tetrominoes (shapes made from four squares).
Here they are:

You are not allowed reflections or rotations of shapes that you have already found.
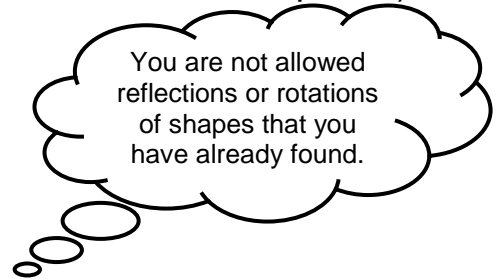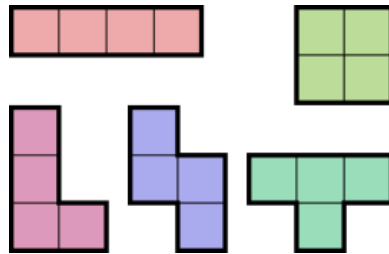
How many different pentominoes (five squares) are there?

Q24. Harry went to Ollivanders and bought a wand for 7 Galleons.
1 Galleon is worth 17 Sickles and 1 Sickle is worth 29 Knuts.
How many Knuts did Harry's wand cost?

Q25. Mr Reader has exactly 5 coins in his pocket.
He has more than 5p in total.
He could have 6p:

He could have 7p:

What is the least amount that he <u>cannot</u> have?
You can use any current British coins.

Wellington School
Maths Challenge 2013

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. \|_____\|

Maths Challenge 2013
Answers

Q1	E
Q2	A
Q3	C
Q4	B
Q5	E
Q6	B
Q7	A
Q8	D
Q9	B
Q10	D
Q11	B
Q12	D
Q13	E
Q14	C
Q15	B
Q16	A
Q17	C
Q18	C
Q19	A
Q20	D
Q21	400
Q22	13 14 15 16
Q23	12
Q24	3451
Q25	88 (pence)