Oundle School: 11+ Maths Paper 2014

School: Oundle School
Subject: Maths
Level: 11+
Time: 60 mins
Type: Past Test Paper
Year in use: 2014

Section A

search

Q	Answer	Solution
1.	(a) 142 (b) 27874 (c) 2208 (d) 255 (e) 17 (g) 47652	
2.	800,008,024	

3.
(a) -1
(b) 120
(c) -20

4.
(a) 11
(b) 26
(c) 1000

5.
(a) A is at (2 , -1) ; B is at (3 , 4) ; C is at (-3 , 4)
(b) Triangle
(c) 15
(d) (-4 , 1)

6.
(a) -4 , -7
(b) 13 , 14.1
(c) 16 , 32

7.

Questions	Answers
$\frac{49\times208}{191}$	26.12844037
$19.78^2+\sqrt{10007}$	491.2833939
$(113-24)(32\div109)$	2.009843660
$\frac{89}{22}\times\frac{234}{471}$	53.36125654

8. (smallest) $-\frac{3}{7}, -\frac{2}{7}, \frac{4}{7}, \frac{10}{14}, \frac{6}{7}$ (largest)

9.	(a) 26 (b) 18 (c) -9
10.	(a) 49.5 (b) 85
11.	(a) 9.5 (b) -8 (c) 16 (d) -63
12.	(a) 50 (b) 0.5 (c) 200
13.	(a) 90° (b) 7.5°
14.	3,428,000

15.

(a) 0705

(b) 1005

(c) 1 hr 9 mins

(d) 1505

(e) 1316

(f) 1509

(g) 14

Section B

search

Q	Answer	Solution
1.	6000	
2.	16 bananas	
3.	(a) 10 (b) 55 (c) 15	
4.	r < c < s From 7 rolls (r) = 4 crumpets (c), we know 1 roll is lighter than 1 crumpet. Similarly, from 5 scones (s) = 6 crumpets, we know 1 scone is heavier than 1 crumpet. Combining the two statements, hence 1 roll is lighter than 1 crumpet, which in turn is lighter than a scone.	
5.	(a) 2 miles (b) Quentin 1/7 hours or 60/7 minutes	

6.

4

Detailed explanation:

From Down 4, possible solutions are 16, 25, 36, 49 and 81.

However, since Across 3 is a square number, and a square number must end with 1, 4, 5, 6 or 9.

Therefore, only 16 and 49 will fit the Across 3 requirement.

From Across 5, which is a prime number. A prime number cannot be ending with 6. Hence, Across 5 must be a number ending with 9.

Hence, it can be 19, 29, 59, 79 or 89. Again, Down 2 is a square number.

Hence, Across 5 can only be 19 or 59.

From that, we know Down 4 must be 49 because the second digit of Across 5 must be 9.

For Down 2, which is a square number ending with either 1 or 5.

Therefore, it can be 121 (11), 441 (21), 961 (31), 225 (15), 625 (25).

Across 1 is a prime number, which cannot be ending with an even number, except 2. Hence, Down 2 can only be 121 or 961. Hence Across 5 must be 19.

Across 3 is a square number ending with 4. Hence, it can be 144 (12), 484 (22), 324 (18) or 784 (28).

The second digit of Across 3 is the same as the Down 2. The only pair that works is 324 (Across 3) and 121 (Down 2).

For the last, to make both Down 1 and Across 1 prime, there are 11 and 13, 41 and 41, 51 and 53, 71 and 73. Hence there are 4 answers.