

**Year 7 Mathematics 2012**

**Whole Number Test**

**Total marks: 72** **Name**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Show your working for any question worth more than one mark.**

1. Put the following numbers in **ascending** order

 *Answer (1) \_\_\_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

2. Using only the digits in the box provided create the following numbers:

 (a) A one digit composite number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (b) A one digit prime number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (c) A factor of 42 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (d) A three-digit multiple of 3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (e) A square number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (f) The smallest 4-digit number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

3. Answer the questions below about the number

 (a) Round to the nearest thousand \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (b) Write the number out in words \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (c) What is the place value of the 3? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (d) What is the value of the 7? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (e) Write the number in expanded form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

4. Write in compact form (as a simple numeral)

 (a) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

5. Write in expanded form

 (a) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

6. Round the following amounts of money

 (a) to the nearest dollar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (b) to the nearest ten cents \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

7. Using one figure approximation to estimate the answers to the following, **show your working.**

 (a)

 *Answer (7a)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 (b)

 *Answer (7b)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

8. Lyn has spilt ink all over her homework can you copy the problems out again and fill in the missing numbers? [5]



Answer

Subtraction

Addition

Answer



9. (a) Write down the first **five** multiples of 8 **and** 6:

 Multiples of 8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 Multiplies of 6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 (b) What is the lowest common multiple of 8 and 6?

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

10. Perform the following calculations **by hand** – **Show full working**

1. 396 +2715 b) Find the difference between 6500 and 234

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2] Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [3]

 c) 19 × 8 d) 32 ÷ 3

 Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2] Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 e) Find the product of 27 and 68 f) 194 ÷ 5

 Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [3] Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

11. Draw a prime factor tree for 56

 [2]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Write 16 as a product of its prime factors, show your working.

 *Answer (12)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

13. Write down two whole numbers whose sum is 13, and whose product is 40

 *Answer (13)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

14. Circle the correct answer, True or False.

 (a) 1 is a prime number T F [1]

 (b) An even number must end in a 0,2,4,6 or 8 T F [1]

 (c) 4033 is divisible by 3 T F [1]

 (d)When two 2-digit numbers are multiplied together they always give a 4-digit number.

 T F [1]

 (e) When using one figure approximation the number 6 would round up to 10.

 T F [1]

 (f) The product of 3 and 12 is 36 T F [1]

15. Mr. Edmeades lines up all the pupils in his school in 9 rows on the domain. Each row has 72 pupils in it. How many pupils are in Mr. Edmeades school?

 *Answer (15)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

16. It is 161 days until Ben’s birthday. How many weeks away is it?

 *Answer (16)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

17. Who am I?

 (a) I am the only number that is neither prime nor composite

 *Answer (18a)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (b) I am a two-digit number. I am a square number. I am greater than 29 and less than 42.

 *Answer (18b)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

(c) I am a two-digit number. The sum of my digits is 3. I am exactly divisible by 5 and 2.

 *Answer (18c)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

18. In the problem below each letter represents one of the digits from 0 to 9. No two letters can stand for the same digit. Find the value of each letter.

|  |  |  |  |
| --- | --- | --- | --- |
|  | A | A | B |
| + | B | B | A |
| B | B | B | D |

 A = \_\_\_\_\_\_ B = \_\_\_\_\_\_ D = \_\_\_\_\_\_ [3]

19. Use the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 once each to fill in the blanks of this puzzle:

 4

 [4]

Working Space: