

**Year 7 Mathematics 2014**

**Whole Number Test**

**Total marks: 76** **Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class**\_\_\_\_\_\_\_\_\_\_\_

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

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

 *Answer (1) \_\_\_*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

2. Using only the digits shown below, create the following numbers:

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

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

 (c) A factor of 16 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (d) A two-digit prime number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

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

 (f) The largest 5-digit number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

3. Answer the questions below about the number

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

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

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

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

 (d) What is the value of the 9? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [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. Use one figure approximation (1 s.f.) to estimate the answers to the following, **show your working.**

 (a)

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

 (b)

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

8. Bill’s dog Bob has chewed his homework. Copy the problems out again and fill in the missing numbers? [4]

Addition

Multiplication

Answer

Answer

 457
+231

 688

\_\_\_\_\_\_\_­\_\_\_

 1 1 5

 X 4

 4 6 0

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

 Multiples of 6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 Multiplies of 9 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 (b) What is the lowest common multiple of 6 and 9?

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

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

1. 4531 + 872 b) Find the difference of 7865 and 456

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

 c) 32 × 7 d) 492 ÷ 3

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

 e) Find the product of 62 and 43 f) Find the quotient of 685 and 5

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

11. (a) List the factor pairs for 15

 *Answer (11a)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

 (b) List the factors of 30

 *Answer (11b)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

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

12. Write 72 as a product of its prime factors, show your working.

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

13. Write down two whole numbers whose sum is 12, and whose product is 32

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

14. Circle the correct answer, True or False.

 (a) Multiplying by zero always results in zero T F [1]

 (b) Odd numbers are not divisible by two T F [1]

 (c) 817 is divisible by 3 T F [1]

 (d) All composite numbers can be written as a product of their prime factors

 T F [1]

 (e) The sum of four and five is twenty T F [1]

 (f) The quotient of six and three is two T F [1]

15. Is 1 a prime number? Explain your answer.

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

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

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

16. Evaluate the following: (Show working)

(a) 4 + 5 x 8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

(b) 6 x 4 + 2 ÷ 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

(c) 2 x 10 + 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

(d) 9 – 8 + 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [1]

17. Suzie has $500 in her bank. She withdraws $370. How much is in her bank account now?

 *Answer (17)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 18. Jamie walks 3 kilometers every day. How far does Jamie walk in 5 weeks.

 *Answer (18)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

19. (a) A movie theatre charges $9 for a child’s ticket and $12 for an adult’s ticket.
 There are 25 children and 15 adults in the movie theatre. How much money was paid for all the
 tickets?

 *Answer (19a)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

 (b) If there were 30 children’s tickets sold and the total money collected for all the tickets was $582,
 how many adult tickets were sold?

 *Answer (19b)*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

20. 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.

|  |  |  |  |
| --- | --- | --- | --- |
| B | D | B | C |
| **-** | C | A | D |
| A | C | A | C |

 A = \_\_\_\_\_\_ B = \_\_\_\_\_\_ C = \_\_\_\_\_\_ D = \_\_\_\_\_\_ [2]

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

 8

 [3]

Working Space: