

**GRADE 8 MATHEMATICS CYCLE TEST**

**TERM 1**

**TIME: 1 HOUR MARKS: 70**

**Instructions:**

1. Answer ALL questions.
2. A non-programmable calculator may be used unless otherwise stated.
3. show all necessary steps in your working unless otherwise stated.
4. When answering questions, apply your knowledge, skills and insight.
5. Number the answers correctly according to the numbering system used in this question paper.
6. Write neatly and legibly.

**Question 3 [7 Marks]**

(a) List the set of all the factors of 16 (1)

(b) Which number is both a factor and a multiple of 15? (1)

(c) Which of the following: 36, 18, 6, 3 and 8

i) are factors of 12? (1)

ii) is a multiple of 12? (1)

(d) List all the factors of 24 which are prime numbers (1)

(e) List the four lowest multiples of 60 (1)

(f) List the factors of 60 which are perfect squares (1)

**Question 4 [6 Marks]**

Complete the tables below as instructed.

|  |  |  |
| --- | --- | --- |
| **Write as a common fraction in its simplest form** | **Write as a decimal fraction** | **Write as a percentage** |
| 2  3 | a) | b) |
| c) | 0,48 | d) |
| e) | f) | 55% |

**Question 5 [4 Marks]**

(a) In a class of 15 people, 20% are boys. How many girls are there? (2)

(b) A store has increased the price of a book by 15%. It now costs R199.50. What was the original price of the book? (2)

**Question 6 [8 Marks]**

Calculate the following

(a) ()2 – ()2  (1)

(b) +  (1)

(c)  (1)

(d)  (1)

(e)  (1)

(f) 1002 x  (1)

(g)  + + 52 (1)

(h)  (1)

**Question 7 [4 Marks]**

Use the ladder method or tree method to express the following numbers as products of their prime factors.

(a) 294

(b) 576

**Question 8 [8 marks]**

Fill in a number in the box to make the number sentence true.

(a) 8 – = – 14 (b) 6 + = – 3

(c) 5 – = 6 (d) 6 – = 2

(e) 6 ÷ = –  (f) – 3 – = 4

(g) – 4 + = – 10 (h) 6×0 – = 3

**Question 9 [12 marks]**

Fill in the answers without the use of a calculator (show working where necessary)

(a) 5 – (28 ÷ 7) + (– 3)

(b) 

(c) 5 – 3(4 – 2) + (– 6)

(d) 18 ÷ – 6 + 3 ÷ – 1

(e) – 11 + 3 × 2 – 6

(f) 3 – (– 2)2 + 2 × – 7 – 4