



BINA BANGSA SCHOOL KJS
MATHEMATICS DEPARTMENT

TOPICAL TEST
NUMBER CONCEPTS AND SIGNED NUMBERS
SEC 1 ACCELERATED TAYLOR

Name: _____

Date: _____

Parent's Signature: _____

1.

-0.4 $\frac{2}{7}$ $\sqrt{65}$ 0 π $\sqrt[3]{-64}$ 16

(a)

In the list above, write down the number/s that is/are

- (i) Integers [1]
- (ii) negative integer [1]
- (iii) positive numbers [1]
- (iv) irrational [1]
- (v) recurring [1]

(b) Arrange the numbers in the same list in ascending order, starting from the smallest value.

[2]

2. Fill in each box with $>$ or $<$.

- (a) -49 -24 (b) $-\frac{1}{8}$ $-\frac{1}{9}$ [2]

3. Given that 378 and 4500 are written as the products of their prime factors as follows.

$$378 = 2 \times 3^3 \times 7 \quad \text{and} \quad 4500 = 2^2 \times 3^2 \times 5^3$$

- (a) Find the greatest whole number that will divide both 378 and 4500 exactly. [1]
- (b) Find the smallest whole number that can be divided by 378 and 4500 exactly. [1]
- (c) Write down the smallest whole number, n , that must divide 4500 such that the resulting number becomes a perfect square number. Hence, find the square root of the resulting number. [2]

4.

- (a) Express 90 as the product of its prime factors, in index (power) form. [1]
- (b) The LCM of 6, 15 and x is 90. If x is an odd number, find all the possible values of x . [2]

5.

- (a) Write down the prime factorisation of 3600 and 27000, in index form. [4]
(b) Write down the $\sqrt{3600}$ and $\sqrt[3]{27000}$ in index form. [2]
(c) Write down the sum of all the prime numbers before $\sqrt{3600} - \sqrt[3]{27000}$. [1]

6. Without using calculator and by showing complete working, find the value of

- (a) $(-4) \div +(-2)^2 \div (-1)^3$ [2]
(b) $49 \div [17 - (4 \times 5 - 10)] + 4 \times (-7)$ [3]
(c) $20.5 \times 4.2 + (17.1 - 3.6) - 9.6 \div 0.2$ [3]
(d) $\frac{2}{5} - \left(-4\frac{1}{2}\right) + \frac{7}{30} \div -\frac{2}{3}$ [3]

7. At 5.45 p.m., Lixen, Khairul and Devi are at the starting point of a 1-km circular path. Lixen takes about 18 minutes to walk around, Khairul takes 360 seconds to run 1 round and Devi cycles 2 rounds every 4 minutes. Find the time when all three of them will next meet. [3]

8. Michael is an art elective program student who is working on an assignment. He plans to cover a rectangular sheet of paper with dimensions 126 cm by 108 cm with identical square patterns. What is the least number of square patterns that could be formed on the sheet of paper? [3]

End Of Topical Test