ARMY BURN HALL COLLEGE FOR GIRLS

ENTRANCE TEST: MATHEMATICS 2022

NAME: _____   **CLASS: CLS II**

TOTAL MARKS: 50   **TIME: 1 HOUR**

Attempt any "five" questions. All questions carry equal marks. Question "six" is compulsory.

1. a) Determine whether 87 is a prime number or composite number.   [10]

   b) Find $\sqrt[3]{1728}$

2. a) Find the HCF of 12 and 30 by prime factorization.   [10]

   b) Use the number line to illustrate the Integers between -4 to 4.

3. a) Expand and Simplify **5(a + 2b) - 3b**   [10]

   b) Express the following as a fraction in its simplest form.
   $$\frac{3x - 4}{5} - \frac{3(x - 1)}{2}$$

4. a) Find the value of $\left(\frac{3}{2}\right)^2 \times \left(\frac{1}{15} - 2\frac{1}{3}\right)$ [10]

   b) Ethan can blow the 15 balloons in 20 minutes; Jun Wei can blow 18 balloons in 25 minutes and Vishal can blow 16 balloons in 21 minutes.

   Assuming that all balloons are blown to the same size, who can blow balloons at the fastest rate?

5. a) Find the value of A:400 = 6:25   [10]

   b) A car arrived at a town at 8:35 am, after traveling for 6 hours. Find the time the car started the journey.

6. Find the value of unknown in the following figure.   [10]