



ARMY BURN HALL COLLEGE FOR GIRLS
ENTRANCE TEST: MATHEMATICS 2022

NAME: _____

CLASS: PJC

TOTAL MARKS: 50

TIME: 1 HOUR

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

- If $x^2 + y^2 = 80$ and $xy = 12$
Find the value of $(x - y)^2$
 - Expand and simplify: $\left(\frac{3}{2}h - 5k\right)^2$
- Solve the following equation by factorization:
 $2x^2 + 5x - 7 = 0$
 - Find the HCF of 15, 60 and 75 (By division method)
- Given that the n^{th} term T_n of a sequence is $T_n = 2n + 5$, Find:
 - The 5th term
 - The 8th term
 - The LCM of 5th term and 8th term
- Solve the following:
 - $\frac{5x}{x+4} = 3x + 1$
 - Solve the following inequality and illustrate the solution on a number line.
 $4x \geq 62$
- Round off the following
 - 9.71cm to the nearest cm
 - 503.88 to (4 S.f)
 - Find the value of decrease 120 by 45%.
- Find the sum of interior angles of 11-gon.
 - In the following figure: HDF is a straight line.
 $AB \parallel CE \parallel FG$, $\widehat{ADH} = 47^\circ$, $\widehat{DFG} = 86^\circ$
Find: \widehat{CDF}

