Udaan 2025
Maths
Real Numbers

DHA - 02

Q 1 If the HCF of 408 and 1032 is expressible in the form 1032m – 408 × 5, find m.

Q 2 Find the largest number which exactly divides 280 and 1245 leaving remainders 4 and 3 respectively.

Q 3 Find the greatest number that divide 445, 572 and 699 leaving remainder 4, 5 and 6 respectively.

Q 4 Find the HCF of 65 and 117 and express it in the form 65m + 117n.

Q 5 If A = 2n + 13, B = n + 7, where n is a natural number, then HCF of A and B is

(A) 2 (B) 1

(C) 3 (D) 4

Q 6 There are 576 boys and 448 girls in a school that are to be divided into equal sections of either boys or girls alone. The total number of sections thus formed are

(A) 22 (B) 16

(C) 36 (D) 21

Q 7 Three farmers have 490 kg, 588 kg and 882 kg of wheat respectively. Find the maximum capacity of a bag so that the wheat can be packed in exact number of bags.

(A) 98 kg (B) 290 kg

(C) 200 kg (D) 350 kg

Q 8 There is a circular path around a sports field. Priya takes 18 minutes to drive one round of the field.Harish takes 12 minutes. Suppose they both start at the same point and at the same time and go in the same direction. After how many minutes will they meet?

(A) 36 minutes

(B) 18 minutes

(C) 6 minutes

(D) They will not meet

Q 9 There are 312, 260 and 156 students in class X, XI and XII respectively. Buses are to be hired to take these students to a picnic. Find the maximum number of students who can sit in a bus if each bus takes equal number of students.

(A) 52 (B) 56

(C) 48 (D) 63

Answer Key

Q1	**2**
Q2	**138**
Q3	**63**
Q4	**HCF = 13**
Q5	**B**
Q6	**B**
Q7	**A**
Q8	**A**
Q9	**A**

Hints & Solutions

Q 1 Text Solution:

$Given\ numbers\ are\ 408\ and\ 1032$
$408 = 2^3 \times 3 \times 17$
$1032 = 2^3 \times 3 \times 43$
$Common\ factors = 2^3, 3$
$HCF = 2^3 \times 3 = 24$
$So,\ 24 = 1032m - 408 \times 5$
$\Rightarrow 24 = 1032m - 2040$
$\Rightarrow 2040 + 24 = 1032m$
$\Rightarrow 1032m = 2064$
$\Rightarrow m = \frac{2064}{1032} = 2$

Video Solution:

Q 2 Text Solution:

$Given\ numbers\ are\ 280\ and\ 1245\ which\ are\ leaving\ remainders\ 4\ and\ 3\ respectively\ when\ divided\ by\ another\ number.$
$So,\ 280 - 4 = 276$
$1245 - 3 = 1242$
$276\ and\ 1242\ are\ the\ numbers\ exactly\ divisible\ by\ a\ number$
$Prime\ factorisation\ of\ 276\ and\ 1242\ are$
$276 = 2^2 \times 3 \times 23$
$1242 = 2 \times 3^3 \times 23$
$Common\ factors = 2,\ 3\ and\ 23$
$HCF = 2 \times 3 \times 23 = 138$

138 is the largest number that divides 280 and 1245 leaving remainders 4 and 3 respectively.

Video Solution:

Q 3 Video Solution:

Q 4 Video Solution:

Q 5 Video Solution:

Q 6 Video Solution:

Q 7 Video Solution:

Q 8 Video Solution:

Q 9 Video Solution: