

CLASS 10 · HOTS · OLYMPIAD PREPARATION · DPP SHEET

Chapter 1: HOTS: Real Numbers (Class 10)

Daily practice problems: 8 questions with an answer key

Try every question on your own first. The answer key is on the last page.

1. Three bells ring at intervals of 8, 12 and 18 minutes. After how many minutes do they ring together again?
2. Is $3\sqrt{2} + 5$ rational or irrational?
3. Find the smallest number which leaves remainder 3 when divided by 8, 12 and 20.
4. Use Euclid's algorithm to find the HCF of 867 and 255.
5. Write the decimal expansion of $\frac{13}{200}$ without long division by first making the denominator a power of 10.
6. If $a = 2^3 \times 3^2$ and $b = 2^2 \times 3^3 \times 5$, find $\text{HCF}(a, b)$ and $\text{LCM}(a, b)$.
7. Find the largest number which divides 70 and 125 leaving remainders 5 and 8 respectively.
8. The product of two numbers is 2160 and their HCF is 12. Find their LCM.

Answer Key

1. 72 minutes.
2. Irrational (if it were rational, $\sqrt{2}$ would be rational).
3. 123 (LCM = 120).
4. 51.
5. 0.065.
6. HCF = 36 and LCM = 1080.
7. 13 (the HCF of 65 and 117).
8. 180.

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