

CLASS 8 · HOTS · OLYMPIAD PREPARATION · DPP SHEET

Chapter 19: HOTS Questions for Class 8

Daily practice problems: 10 questions with an answer key

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

1. Find the smallest number by which 1470 must be multiplied to give a perfect square.
2. Find the smallest number by which 3087 must be divided to give a perfect cube.
3. The sum of the digits of a two-digit number is 11. If 45 is subtracted from the number, the digits are reversed. Find the number.
4. The denominator of a fraction is 5 more than its numerator. When 2 is added to both, the fraction becomes $\frac{2}{3}$. Find the fraction.
5. If $x + \frac{1}{x} = 3$, find $x^2 + \frac{1}{x^2}$.
6. A shopkeeper sells two articles for Rs 900 each, one at a gain of 25% and the other at a loss of 25%. Find his overall loss in rupees.
7. A price is increased by 10% and the new price is then decreased by 10%. The final price is Rs 990. Find the original price.
8. Each interior angle of a regular polygon is 150° . Find the number of sides.
9. The perimeter of a rectangle is 80 m and its length is 10 m more than its breadth. Find its area.
10. A bag has 4 red and 6 blue balls. How many more red balls must be added so that the probability of drawing a red ball is $\frac{1}{2}$?

Answer Key

1. 30 ($1470 = 2 \times 3 \times 5 \times 7^2$, and the product is $44\,100 = 210^2$).
2. 9 ($3087 = 3^2 \times 7^3$, and the quotient is $343 = 7^3$).
3. 83 ($83 - 45 = 38$).
4. $\frac{8}{13}$.
5. 7.
6. Rs 120 (cost prices are Rs 720 and Rs 1200; total cost 1920 against 1800).
7. Rs 1000.
8. 12.
9. 375 square metres.
10. 2.

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