

CLASS 8 · HOTS · OLYMPIAD PREPARATION · DPP SHEET

Chapter 8: HOTS: Algebra Play (Class 8)

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. Think of a number, multiply by 3, add 12, divide by 3 and subtract the number you started with. Show that the answer is always 4.
2. The sum of four consecutive numbers is 106. Find them.
3. In a calendar, the middle date of a 3×3 square is 15. Find the sum of the nine dates.
4. Two numbers add up to 30. What is the largest possible product?
5. A father is four times as old as his son. In 5 years he will be three times as old. Find their ages now.
6. Solve $3x - 7 = 2x + 5$.
7. One number is 5 more than three times another number, and their sum is 37. Find the numbers.
8. In a number pyramid the bottom row is 2, 5, 3 and each number above is the sum of the two below it. Find the top number.

Answer Key

1. $\frac{3n+12}{3} - n = n + 4 - n = 4.$
2. 25, 26, 27 and 28.
3. 135.
4. 225 (both numbers 15).
5. The son is 10 and the father is 40.
6. $x = 12.$
7. 8 and 29.
8. 15 (the middle row is 7 and 8).

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