

Puzzle of the Week: What is the next number in the following sequence?

1, 11, 21, 1211, 111221, 312211, . . .

(Hint: NO fancy mathematics is involved!)

I. Solve the following equations.

1. $-7x = 56$
2. $6x + 9 = 51$
3. $-3y - 4.7 = 11.8$
4. $w - 10 = -6w + 4$
5. $4t - 7 = 2t - 7$
6. $13u - 15u + 8 = 4u + 2 - 24$
7. $5(y + 4) = 4(y + 5)$
8. $6(y - 4) = 3(y - 8) + 7$
9. $10v - 2(v + 4) = 8(v - 2) + 6$
10. $\frac{3}{8} + \frac{b}{3} = \frac{5}{12}$
11. $\frac{3t + 1}{8} = \frac{5 + 2t}{7}$
12. $4 - \frac{2z + 7}{9} = \frac{7 - z}{12}$
13. $\frac{m - 4}{3} - \frac{3m - 1}{5} = 1$
14. $\frac{n + 1}{8} - \frac{2 - n}{3} = \frac{5}{6}$
15. $\frac{1}{3}(y + 4) + 5 = \frac{1}{4}(3y - 1) - 2$
16. $\frac{1}{5}(2y - 1) - 2 = \frac{1}{2}(3y - 5) + 3$

II. Solve the following problems

1. Find two numbers such that the second number is 3 more than twice the first number and the sum of the two number is 72.
2. Kelsey told Benji that her three latest art history quiz scores are three consecutive even integers whose sum is 264. Help Benji find the scores.
3. Four times the difference of a number and 2 is the same as 6 times the number, increased by 2. Find the number.
4. Twice the sum of a number and 3 is the same as 1 subtracted from the number. Find the number.
5. The United States consists of 2271 million acres of land. Approximately 29% of this land is federally owned. How much acres of land is not federally owned.
6. A computer store just announced a 20% discount on a particular computer model. If the original price is \$1250, what is the price you have to pay.
7. A department store had a 15% sale on all pairs of jeans. What is the original price of a pair of jeans if the discounted price is \$24.
8. The new governor of California will make \$4,000 less than the governor of New York, and \$89,000 more than the governor of Alaska. If the sum of these 3 salaries is \$440,000, find the salary of each governor.
9. The three tallest hospitals in the world are Guy's Tower in London, Queen Mary Hospital in Hong Kong, and Galter Pairlion in Chicago. These buildings have a total height of 1320 feet. Guy's Tower is 67 feet taller than Galter Pairlion, and the Queen Mary Hospital is 47 feet taller than Galter Pairlion. Find the heights of the three hospitals.