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SAMPLE SECTION I [GOAL 8-10 Minutes All Correct] Score: \_\_\_\_/18

Solve these linear equations:

1.  $3 - x - 4 = -10$

2.  $4 - 2x = -16$

3.  $4 + 10x = 64$

4.  $9x - 3 = 15$

5.  $9 + 9x = 81$

6.  $2 + x - 2 = 9$

7.  $6 + 6x = 60$

8.  $6 + 9x = 33$

9.  $7x - 4 = 24$

10.  $x + 9 - 6 = 12$

11.  $3 - x - 7 = -9$

12.  $2/x + 3 = 5$

13.  $4 + 7x = 60$

14.  $3x + 6 = 27$

15.  $6 - x - 9 = -7$

16.  $10x + 7 = 57$

17.  $x + 3 - 8 = -3$

18.  $x - 5 - 10 = -7$

SAMPLE

Score: \_\_\_/10

1-6. Replace ? with < or >.

1.  $\frac{2}{3} + \frac{5}{6} ? \frac{3}{4} + \frac{5}{6}$

2.  $\frac{2}{3} ? \frac{1}{2} (\frac{2}{3} + \frac{5}{7}) ? \frac{5}{7}$

3.  $\frac{12}{17} ? \frac{1}{2} (\frac{12}{17} + \frac{18}{23}) ? \frac{18}{23}$

4.  $\frac{12}{13} + \frac{8}{9} ? \frac{14}{15} + \frac{8}{9}$

5.  $\frac{16}{21} ? 4(\frac{1}{7} + \frac{2}{21}) ? \frac{8}{7}$

6.  $\frac{11}{17} - \frac{5}{7} ? \frac{13}{19} - \frac{5}{7}$

**Word Problems:**

7. CDs cost \$9 for a dozen in the month of January. In February, their price becomes 50% of that in January. In March, the price becomes 1 1/2 times of the price in February. In April, the price becomes double of that in March. Calculate the prices for all the months from February to April.

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8. Javier planted a 10-ft tree in his yard. For the first 3 years, the tree grew evenly to 14 ft. After that its height increased by 75% of the previous year's increase. How tall was the tree after 4 years?

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9. A family spends \$2400 before taxes in a month. 1/3 of the expenses are on food, 1/2 are on house mortgage and the rest are on clothing and other miscellaneous expenses. There are no taxes on food and mortgage. Taxes on clothing and miscellaneous items are 6.25%. What is the total expense in the month?

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10. Last year, enrollment of boys and girls at a college was in the ratio of 2:3. This year, the ratio of boys to girls has reversed. The total enrollment has remained the same. By what percentage has the enrollment of girls dropped this year over last year?

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