

1. If $1 - x = 6$, then x is
- A) 5 B) -5 C) 7 D) -7 E) -4
2. If $1 + 2x = x$, then x is ...
- A) -2 B) -1 C) 0 D) 1 E) 2
3. If $\frac{1}{2} - x = \frac{1}{4}$, then x is ...
- A) 1 B) 0.2 C) 0.25 D) 0.4 E) 0.5
4. If $0.5x = 16$, then x is
- A) 8 B) 12 C) 16 D) 32 E) 36
5. If $0.04 \cdot (x - 100) + 0.005 \cdot x = 14$, then find x .
- A) 25 B) 72 C) 124 D) 320 E) 400
6. If $\frac{1}{2x} = 0.25$, then x is ...
- A) 1 B) 2 C) 3 D) 4 E) 5
7. If $1 + \frac{1}{2 - \frac{3}{x}} = 2$, then x is
- A) 1 B) 3 C) -1 D) -3 E) $\frac{1}{2}$
8. $\frac{\frac{x}{4}}{2} + \frac{x}{4} = \frac{14}{8} \Rightarrow x = ?$
- A) $\frac{1}{2}$ B) $\frac{7}{5}$ C) 2 D) $\frac{5}{2}$ E) 5
9. If $\frac{\frac{x}{2} - 1}{2 + 3 \cdot (x - 1)} = 2$, then find x .
- A) $\frac{2}{11}$ B) $\frac{1}{5}$ C) -6 D) 4 E) -4
10. Find the value of x that satisfies the equation
- $$1 - \frac{1}{1 + \frac{1}{x+1}} = 4.$$
- A) $\frac{1}{4}$ B) $\frac{1}{3}$ C) 1 D) 2 E) 3

11. Given that $x - y = 6$ and $x + y = 8$. What is $x \cdot y$?

A) 6 B) 7 C) 8 D) 9 E) 10

12. What is the solution set of the system

$$\begin{cases} x + \frac{y}{2} = 5 \\ \frac{x}{2} - y = -5 \end{cases} ?$$

A) (6,2) B) (2,6) C) (6,4) D) (2,8) E) (-2,8)

13. $\begin{cases} 5x + 14y = 37 \\ 3x - 7y = 53 \end{cases} \Rightarrow (x, y) = ?$

A) (-13,-2) B) (-13,2)
C) (13,2) D) (13,-2)

14. If $\begin{cases} \frac{2}{x} + \frac{3}{y} = 2 \\ \frac{12}{x} - \frac{9}{y} = 3 \end{cases}$, then find the value of $x + y$.

A) 3 B) 5 C) 6 D) 7 E) 8

15. $\begin{cases} \frac{1}{m} - \frac{1}{n} = -\frac{1}{12} \\ \frac{2}{m} + \frac{3}{n} = \frac{3}{2} \end{cases} \Rightarrow m = ?$

A) 3 B) 4 C) 5 D) 6 E) 7

16. Which one of the followings is **not** a solution of the equation $(x^2 - 9)(4x - x^3) = 0$?

A) -3 B) -2 C) 0 D) 2 E) 5

17. What is the number of solution(s) of the equation $x^3 - x = 0$?

A) 1 B) 2 C) 3 D) 4 E) 5