

This problem set is intended for practicing **checking** solutions of equations, inequalities, and systems of equations. Instead of applying systematic methods to find solutions (i.e. solving), just check each of the answers offered to eliminate all incorrect answers. During the course, we will learn how to solve most of these problems.

- Find all solutions of the equation. $|2x - 3| = 11$
A) 4 and 7 B) 4 C) -4 and 7 D) -7, 7 E) -4
- Solve the equation. $x^2(x + 1) = -x^2 - x + 6(x + 1)$
A) -3 and -1 B) -3, -1, and 2 C) -1, and 2 D) -1, -2, and 3 E) 1, and 3
- Solve the following equation. $x^3 = 4x$
A) -2, 0, and 2 B) -2 and 2 C) 2 D) 0 and 4 E) 0 and -1
- Which of the following numbers is a solution of the inequality $2x^2 + 5x \leq 3$?
A) -5 B) 3 C) -4 D) 4 E) -2
- Which of the following is a solution of $5x - y = 8$?
A) $x = 3$ and $y = -7$ C) $x = 1$ and $y = -3$ E) $x = -2$ and $y = 3$
B) $x = 2$ and $y = -2$ D) $x = -1$ and $y = 13$
- Solve the following system of equations: $\begin{cases} 5x + y = 25 \\ x = y - 7 \end{cases}$
A) $x = 2$ and $y = 15$ C) $x = 5$ and $y = 12$ E) $x = 3$ and $y = 10$
B) $x = 5$ and $y = 0$ D) $x = 10$ and $y = -25$
- Which of the the following numbers is NOT a solution of the inequality $-t + 1 > -t^2 + 7$?
A) -5 B) -3 C) -2 D) 4 E) 7
- Solve the following system of equations: $\begin{cases} 2x + 3y = 11 \\ x - 4y = 0 \end{cases}$
A) $x = 4$ and $y = 1$ C) $x = 1$ and $y = 3$ E) $x = 12$ and $y = 3$
B) $x = 10$ and $y = -3$ D) $x = -1$ and $y = 4$
- Solve: $-6(t + 3) + 2(5 - t) = -t + 2(t + 5)$
A) 0 B) 5 C) -5 D) -2 E) 2
- Which of the following numbers is a solution of the inequality $\frac{x + 7}{5} - \frac{x - 1}{3} > 2$?
A) 28 B) -17 C) 13 D) -2 E) 43