

## Expression and Equations Level 2-Part 3

1. Solve for x: $\sqrt{x-3} = x-15$
2. Solve for x: $\sqrt{x+3} = x-9$
3. Solve for x: $\sqrt{x-3} = x-5$
4. Solve for x: $\sqrt{x+5} = x-7$
5. Solve for x: $\sqrt{x-3} = x-5$
6. Solve for x: $\sqrt{x+6} = x$
7. What is the value of x: $y = 2x + 4.35$ $y = -4x - 13.65$
8. What is the value of x: $y = 5x + 1.5$ $y = -5x + 51.5$

9. What is the value of x:	$y = 4x + 8.3$ $y = 3x + 10.3$
10. What is the value of x:	$y = 3x + 9.55$ $y = -2x - 5.45$
11. For what value of k is there no solution:	$kx + 2y = -2$ $-2x + 3y = 10$
12. For what value of k is there no solution:	$kx + y = -12$ $-2x + 2y = 6$
13. For what value of k is there no solution:	$kx + 2y = -13$ $x + 3y = -24$
14. For what value of k is there no solution:	$kx - y = 14$ $5x + 4y = 38$
15. For what value of k are there infinitely many solutions:	$kx + 6y = 17$ $4x + y = 102$
16. For what value of k are there infinitely many solutions:	$kx - 12y = 22$ $-2x + 4y = -66$

17. For what value of  $k$  are there infinitely many solutions:

$$\begin{aligned} kx + 20y &= 9 \\ -x - 5y &= -36 \end{aligned}$$

18. For what value of  $k$  are there infinitely many solutions:

$$\begin{aligned} kx - 18y &= 21 \\ 4x - 3y &= 126 \end{aligned}$$

**Answers**

- 1  $x=19$  and  $x=12$
- 2  $x=13$  and  $x=6$
- 3  $x=7$  and  $x=4$
- 4  $x=11$  and  $x=4$
- 5  $x=7$  and  $x=4$
- 6  $x=3$  and  $x=-2$
- 7  $x=5$
- 8  $x=2$
- 9  $x=-3$
- 10  $x=2$
- 11  $k=-4/3$
- 12  $k=-2/2$
- 13  $k=2/3$
- 14  $k=-5/4$
- 15  $k=24$
- 16  $k=6$
- 17  $k=4$
- 18  $k=24$