

## Intermediate Algebra Skill

### Solving Index 2 Radical Equations: Radical on Both Sides

Solve the following Radical equations:

1)  $\sqrt{2r-3} = \sqrt{r+3}$

2)  $\sqrt{3x-2} = \sqrt{x+10}$

3)  $\sqrt{4x+4} = \sqrt{6x-2}$

4)  $\sqrt{4t+8} = 2\sqrt{t}$

5)  $\sqrt{3x-5} = \sqrt{x+9}$

6)  $\sqrt{3k+5} = 2\sqrt{k}$

7)  $3\sqrt{x} = \sqrt{x+8}$

8)  $\sqrt{3f-4} = 2\sqrt{3f-2}$

9)  $2\sqrt{3b-5} - \sqrt{2b+10} = 0$

10)  $2\sqrt{m+4} - \sqrt{7m+1} = 0$

11)  $\sqrt{x} + 1 = \sqrt{x+11}$

12)  $\sqrt{x+1} = 2 - \sqrt{x}$

13)  $\sqrt{x+7} = 3 + \sqrt{x-8}$

14)  $\sqrt{x+2} + \sqrt{3x+4} = 2$

15)  $\sqrt{x} + \sqrt{x-9} = 1$

16)  $\sqrt{2x+7} - \sqrt{x+15} = -1$

## Answers to Solving Index 2 Radical Equations: Radical on Both Sides

1) 6

2) 6

3) 3

4) no solution

5) 7

6) 5

7) 1

8) no solution

9) 3

10) 5

11) 25

12)  $9/16$

13) 9

14) -1

15) no solution

16) 1