

Radical Equations and Imaginary Numbers
Worksheet

#1-#8: SOLVE

1. $\sqrt{x} + 3 = 7$

2. $\sqrt{3x+1} = 5$

3. $(2x+3)^{\frac{1}{3}} = 2$

4. $12 + \sqrt{2x-1} = 4$

5. $\sqrt{x+1} - \sqrt{2x-7} = 0$

6. $\sqrt{4x+1} = 3 + \sqrt{4x-2}$

7. $2 - 3\sqrt{11x+3} = -13$

8. $\sqrt[3]{2x} = 4$

#9-#20: SIMPLIFY

9. $-4\sqrt{-36}$

10. $\sqrt{-5} \cdot \sqrt{-10}$

11. $\frac{\sqrt{18}}{2i\sqrt{6}}$

12. $\sqrt{-25} + \sqrt{-36}$

13. $(5 - 7i) - (8 + 2i)$

14. $3(-2 + i) - 4(3 - 2i)$

15. $(2i + 5)(4 - 3i)$

16. $(2 - 4i)^2$

17. $\frac{1}{\sqrt{-5}}$

18. $(7 - 6i)(2 - 3i)$

19. $\frac{5}{3+i}$

20. $\frac{3+4i}{4-5i}$