

11-3 Skills Practice

Radical Equations

*** ALL WORK ON LOOSE LEAF ***

Solve each equation. Check your solution.

1. $\sqrt{f} = 7$

2. $\sqrt{-x} = 5$

3. $\sqrt{5p} = 10$

4. $\sqrt{4y} = 6$

5. $2\sqrt{2} = \sqrt{u}$

6. $3\sqrt{5} = \sqrt{-n}$

7. $\sqrt{g} - 6 = 3$

8. $\sqrt{5a} + 2 = 0$

9. $\sqrt{2c-1} = 5$

10. $\sqrt{3k-2} = 4$

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

12. $\sqrt{4x-4} - 4 = 0$

13. $\frac{\sqrt{d}}{3} = 4$

14. $\sqrt{\frac{m}{3}} = 3$

15. $x = \sqrt{x+2}$

16. $d = \sqrt{12-d}$

Steps: ① Get radical by itself ② square both sides
When done, check solutions - WATCH for "EXTRANEIOUS" SOLUTIONS

EXAMPLE: $\sqrt{2g+7} = 3$

$(\sqrt{2g+7})^2 = 3^2$

$2g+7 = 9$
-7 -7

$\frac{2g}{2} = \frac{2}{2}$

CK $\sqrt{2 \cdot 1 + 7} = 3$
 $\sqrt{9} = 3 \checkmark$

$g = 1$

EXAMPLE: $\sqrt{3x-5} = x-1$

$(\sqrt{3x-5})^2 = (x-1)^2$

$3x-5 = (x-1)(x-1)$

$3x-5 = x^2 - 2x + 1$

$-3x+5 \quad -3x+5$

$0 = x^2 - 5x + 6$

$0 = (x+2)(x-3)$

$x = \{-2, +3\}$

sum = -5
prod = 6
-2 -3

657 CK $\sqrt{6-5} = 2-1$ CK $\sqrt{4} = 2$
x=2 \checkmark x=3 \checkmark