Algebra 1

Name_____

Radical Equations Day1

Date_____ Period____

Solve each equation.

1) $\left(\sqrt{2m}\right)^2 = \left(\sqrt{6-m}\right)^2$

$2m = 6 - m$

$+m \quad +m$

$\frac{3m}{3} = \frac{6}{3}$

$\boxed{m = 2}$

2) $\left(\sqrt{a}\right)^2 = \left(\sqrt{2a-1}\right)^2$

$a = 2a - 1$

$-2a \quad -2a$

$\frac{-a}{-1} = \frac{-1}{-1}$

$\boxed{a = 1}$

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

4) $\sqrt{7n} = \sqrt{6n+1}$

5) $\sqrt{33-2n} = \sqrt{n-9}$

6) $\sqrt{r} = \sqrt{2r-9}$

7) $\sqrt{x} = \sqrt{2x-10}$

8) $\sqrt{2x-8} = \sqrt{x}$

9) $\left(\sqrt{\frac{k}{5}}\right)^2 = \left(\sqrt{36-k}\right)^2$

$5 \cdot \frac{k}{5} = (36-k)5$

$k = 180 - 5k$

$+5k \quad +5k$

$6k = 180$

10) $\sqrt{k} = \sqrt{4-k}$

Algebra 1

Name_____

Equations Day2

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\frac{40}{5} = \frac{5\sqrt{x}}{5}$

$8^2 = (\sqrt{x})^2$

$x = 64$

2) $10 + \sqrt{x} = 17$

$-10 \quad -10$

$(\sqrt{x})^2 = (7)^2$

$x = 49$

3) $6\sqrt{x} = 48$

4) $\sqrt{5x} + 3 = 8$

5) $1^2 = (\sqrt{x+10})^2$

$1 = x + 10$

$-10 \quad -10$

$x = -9$

6) $\sqrt{x} - 5 = -1$

7) $\sqrt{16x} = 4$

8) $-8 = \sqrt{n} - 9$

9) $10 = 1 + \sqrt{v+1}$

10) $2 = 2\sqrt{p+9}$