Elementary Algebra Skill

Solving Quadratic Equations: Square Root Law

Solve each equation by taking square roots.

1) $r^2 = 96$

2) $x^2 = 7$

3) $x^2 = 29$

4) $r^2 = 78$

5) $b^2 = 34$

6) $x^2 = 0$

7) $a^2 + 1 = 2$

8) $n^2 - 4 = 77$

9) $m^2 + 7 = 6$

10) $x^2 - 1 = 80$

11) $4x^2 - 6 = 74$

12) $3m^2 + 7 = 301$

13) $7x^2 - 6 = 57$

14) $10x^2 + 9 = 499$

15) $(p - 4)^2 = 16$

16) $(2k - 1)^2 = 9$

17) $(6x + 2)^2 + 4 = 28$

18) $10(x - 7)^2 = 440$

19) $9(2m - 3)^2 + 8 = 449$

20) $4(6x - 1)^2 - 5 = 223$

OBJECTIVE 4–b: To solve quadratic equations using perfect squares (more challenging exercises).

What Do You Get When You Cross a Cooking Utensil With a Mathematical Formula?

Solve each equation below. Find the solution set at the bottom of the page and cross out the letter above it. When you finish, the answer to the title question will remain.

1. $(x-4)^2=25$
2. $5(x+7)^2=5$
3. $3(x-2)^2=36$
4. $x^2-10x+25=9$
5. $x^2-6x+9=49$
6. $x^2+2x+1=64$
7. $x^2-18x+81=24$
8. $x^2+12x+36=75$
9. $\left(x-\frac{1}{2}\right)^2=1$
10. $\left(x-\frac{3}{2}\right)^2=\frac{7}{4}$
11. $\left(x+\frac{5}{2}\right)^2=\frac{15}{4}$
12. $2x^2=5$
13. $\left(x-\frac{1}{2}\right)^2=\frac{3}{2}$
14. $\left(x-\frac{3}{5}\right)^2=\frac{4}{5}$
15. $3\left(x+\frac{7}{3}\right)^2=1$

S	T	C	A	H	S	P	E	A	O	L	I	T	I	P	A	D	N	I	X	H
$\{2, 8\}$	$\{9 \pm 2\sqrt{6}\}$	$\{-8, -6\}$	$\left\{\pm\frac{\sqrt{30}}{6}\right\}$	$\{-1, 9\}$	$\left\{\frac{-7 \pm \sqrt{3}}{3}\right\}$	$\left\{\frac{1 \pm 4\sqrt{5}}{5}\right\}$	$\{-6 \pm 5\sqrt{3}\}$	$\left\{\frac{3 \pm 2\sqrt{5}}{5}\right\}$	$\left\{\frac{-7 \pm \sqrt{6}}{2}\right\}$	$\{-4, 10\}$	$\left\{-\frac{1}{2}, \frac{3}{2}\right\}$	$\{-3, 5\}$	$\left\{\pm\frac{\sqrt{10}}{2}\right\}$	$\{-6 \pm 2\sqrt{7}\}$	$\left\{\frac{-5 \pm \sqrt{15}}{2}\right\}$	$\{2 \pm 2\sqrt{3}\}$	$\left\{\frac{3 \pm \sqrt{7}}{2}\right\}$	$\{9 \pm 3\sqrt{5}\}$	$\left\{\frac{1 \pm \sqrt{6}}{2}\right\}$	$\{-9, 7\}$