Moving Words

Solve each equation in the top block and find the solution set in the bottom block. (One equation has no solution.) Transfer the word from the top box to the corresponding bottom box.

$x^2 = 81$ (1) TO	$y^2 - 49 = 0$ (6) MAKE	$4x^2 - 200 = -20$ (11) THE	$(x - 2)^2 = 28$ (16) STUDENTS
$a^2 = 20$ (2) WAS	$x^2 - 16 = 8$ (7) ONCE	$7y^2 + 18 = 4$ (12) THERE	$3(x - 5)^2 = 12$ (17) TEACHER
$3n^2 = 45$ (3) IN	$b^2 + 11 = 86$ (8) TEN	$(x - 1)^2 = 9$ (13) LAUGH	$5(n + 1)^2 = 40$ (18) TEN
$7x^2 = 84$ (4) WHO	$2x^2 - 3 = 15$ (9) NO	$(a + 3)^2 = 25$ (14) TOLD	$(2x - 3)^2 = 81$ (19) JOKES
$2v^2 = 180$ (5) BUT	$5w^2 + 8 = 58$ (10) A	$(t - 4)^2 = 7$ (15) DID	$(4t + 1)^2 = 49$ (20) PUN

no solution	$\{\pm 2\sqrt{6}\}$	$\{\pm 2\sqrt{5}\}$	$\{\pm \sqrt{10}\}$	$\{7, 3\}$
$\{\pm 2\sqrt{3}\}$	$\{2, -8\}$	$\{\pm 5\sqrt{3}\}$	$\{6, -3\}$	$\{\pm 9\}$
$\{\pm 7\}$	$\{\pm 2\sqrt{3}\}$	$\{2 \pm 2\sqrt{7}\}$	$\{4, -2\}$	$\{\pm 3\sqrt{10}\}$
$\{\pm 3\}$	$\{\frac{3}{2}, -2\}$	$\{\pm\sqrt{15}\}$	$\{-1 \pm 2\sqrt{2}\}$	$\{4 \pm \sqrt{7}\}$

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
$\{2, 8\}$	$\{9 \pm 2\sqrt{6}\}$	$\{-8, -6\}$	$\left\{\frac{\sqrt{30}}{6}, \pm\right\}$	$\{-1, 9\}$	$\left\{\frac{-7 \pm \sqrt{3}}{3}\right\}$	$\left\{\frac{1 \pm 4\sqrt{5}}{5}\right\}$	$\{-6 \pm 5\sqrt{3}\}$	$\left\{\frac{3 \pm 2\sqrt{5}}{5}\right\}$	$\left\{\frac{-7 \pm \sqrt{6}}{2}\right\}$	$\{-4, 10\}$	$\left\{-\frac{1}{2}, \frac{3}{2}\right\}$	$\{-3, 5\}$	$\left\{\frac{\sqrt{10}}{2}, \pm\right\}$	$\{-6 \pm 2\sqrt{7}\}$	$\left\{\frac{-5 \pm \sqrt{15}}{2}\right\}$	$\{2 \pm 2\sqrt{3}\}$	$\left\{\frac{3 \pm \sqrt{7}}{2}\right\}$	$\{9 \pm 3\sqrt{5}\}$	$\left\{\frac{1 \pm \sqrt{6}}{2}\right\}$	$\{-9, 7\}$