

Solving Using the Distributive Property/Combining Like Terms

Solve and then check your solution:

1. $5(n+1) - 3n = 9$

check

cut $5n+5-3n=9$

$5n+5$	$=9$
$-3n$	-5
<hr/>	
$2n$	$=4$
$\frac{2n}{2}$	$\frac{4}{2}$
<hr/>	
n	$=2$

$n=2$

$5(n+1) - 3n = 9$
 $5(2+1) - 3(2) = 9$
 $15 - 6 = 9$
 $9 = 9 \checkmark$

3. $8 = 8 + 5(y-1)$

check

cut $8 = 8 + 5y - 5$

8	$=8+5y-5$
-3	-5
<hr/>	
5	$=3$
$\frac{5}{5}$	$\frac{3}{5}$
<hr/>	
1	$=\frac{3}{5}$

$1=y$

$8 = 8 + 5(y-1)$
 $8 = 8 + 5(1-1)$
 $8 = 8 \checkmark$

5. $\frac{1}{2}(2x+4) = 8$

check

$x+2$	$=8$
-2	-2
<hr/>	
x	$=6$

$\frac{1}{2}(2x+4) = 8$
 $\frac{1}{2}(2(6)+4) = 8$
 $\frac{1}{2}(16) = 8$
 $8 = 8 \checkmark$

$x=2$

$-7x+14$	$=-14$
-14	-14
<hr/>	
$-7x$	$=-28$
$\frac{-7x}{-7}$	$\frac{-28}{-7}$
<hr/>	
x	$=4$

check

2. $-7(x-2) = -14$

$-7x+14$	$=-14$
-14	-14
<hr/>	
$-7x$	$=-28$
$\frac{-7x}{-7}$	$\frac{-28}{-7}$
<hr/>	
x	$=4$

$-7(x-2) = -14$
 $-7(4-2) = -14$
 $-7(2) = -14$
 $-14 = -14 \checkmark$

4. $2(x-1) - 4(x-1) = -10$

check

cut $2x-2-4x+4 = -10$

$2x-2$	$-4x+4$	$=-10$
$-2x$	$+2$	-10
<hr/>		
$-2x$	$+2$	-10
$\frac{-2x}{-2}$	$\frac{2}{-2}$	$\frac{-10}{-2}$
<hr/>		
x	$=6$	

$2(x-1) - 4(x-1) = -10$
 $2(6-1) - 4(6-1) = -10$
 $10 - 20 = -10$
 $-10 = -10 \checkmark$

6. $3x - (x-4) = 2$

check

cut $3x-x+4 = 2$

$2x+4$	$=2$
-4	-4
<hr/>	
$2x$	$=-2$
$\frac{2x}{2}$	$\frac{-2}{2}$
<hr/>	
x	$=-1$

$3x - (x-4) = 2$
 $3(-1) - (-1-4) = 2$
 $-3 + (-5) = 2$
 $2 = 2 \checkmark$

What Should You Do If Your Lawn Is Always Dry ?

Solve each formula below for the indicated letter. Circle the letter next to your answer. Write this letter in the box at the bottom of the page that contains the number of that exercise.

OBJECTIVE 2-b: To solve a formula for a given variable.
(formulas have no variables in the denominator).

10	3	12	8	20	6	16	5	9	15	1	11	19	13	4	17	7	18	2	14
B	U	V	A	D	E	W	I	T	Y	O	U	R	S	E	L	F	K	I	T
1	(K) $\ell = \frac{w}{A}$	(O) $\ell = \frac{A}{w}$	$A = \ell w$, for ℓ	5	(O) $h = \frac{2\pi r}{S}$	(I) $h = \frac{2\pi r S}{S}$	$S = 2\pi r h$, for h	9	(T) $m = \frac{E}{c^2}$	(K) $m = Ec^2$	$E = mc^2$, for m	13	(N) $B = 2SF$	(S) $B = \frac{S-F}{2}$	(S) $B = 2B + F$, for B	17	(L) $d = \frac{2T}{rhg}$	(R) $d = \frac{rhg}{2T}$	$T = \frac{rhg}{2}$, for d
2	(I) $R = \frac{E}{I}$	(V) $R = EI$	$E = IR$, for R	6	(E) $T = V + F$	(R) $T = \frac{F}{V}$	$V = T - F$, for T	10	(B) $a = \frac{2S}{t^2}$	(S) $a = \frac{t^2}{2S}$	$S = \frac{1}{2}at^2$, for a	14	(M) $t = \frac{p+r}{Ap}$	(T) $t = \frac{A-p}{pr}$	$A = p + prt$, for t	18	(B) $m = \frac{y-x}{b}$	(K) $m = \frac{y-b}{x}$	$y = mx + b$, for m
3	(U) $r = \frac{1}{pt}$	(X) $r = \frac{1}{t}$	$I = prt$, for r	7	(T) $h = \frac{Ab}{2}$	(F) $h = \frac{2A}{b}$	$A = \frac{1}{2}bh$, for h	11	(E) $r^2 = A\pi$	(U) $r^2 = \frac{A}{\pi}$	$A = \pi r^2$, for r^2	15	(P) $w = \frac{p+\ell}{2}$	(Y) $w = \frac{p-2\ell}{2}$	$p = 2\ell + 2w$, for w	19	(R) $C = \frac{5}{9}(F - 32)$	(N) $C = \frac{5}{9}F + 32$	$F = \frac{9}{5}C + 32$, for C
4	(E) $\ell = \frac{V}{wh}$	(A) $\ell = \frac{V}{wh}$	$V = \ell wh$, for ℓ	8	(I) $B = 3Vh$	(A) $B = \frac{3V}{h}$	$V = \frac{1}{3}Bh$, for B	12	(G) $v^2 = \frac{2m}{E}$	(Y) $v^2 = \frac{2E}{m}$	$E = \frac{1}{2}mv^2$, for v^2	16	(W) $h = \frac{3V}{\pi r^2}$	(T) $h = \frac{3r^2}{\pi V}$	$V = \frac{1}{3}\pi r^2 h$, for h	20	(D) $r^3 = \frac{3V}{4\pi}$	(N) $r^3 = \frac{4V\pi}{3}$	$V = \frac{4}{3}\pi r^3$, for r^3