Algebra 1 1.5

Solve equations with one variable.

Solve equations with two variables.

open sentence

equation

solution

replacement set

element

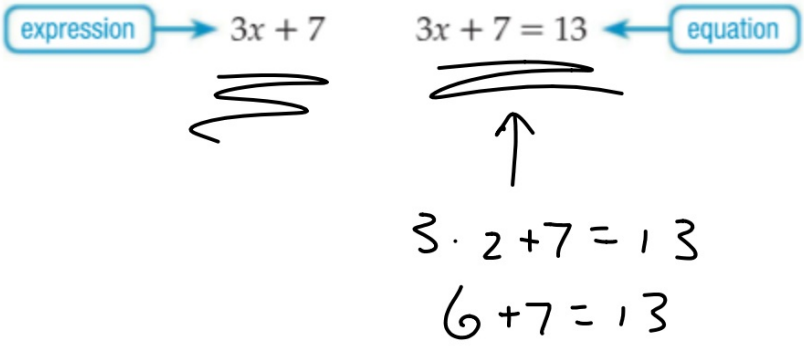
solution set

$x + 5 = 7$

$\{3, 2, 8\}$

$2(x+6) = 18 - x$

$2(9) = 18 - 3$



$3 \cdot 2 + 7 = 13$

$6 + 7 = 13$

23. $r = \dfrac{9(6)}{(8-1)3}$ $r = \dfrac{54}{27} = 2$

24. $a = \dfrac{4(13-1)}{3(6)-5} + 7$ $\dfrac{52}{13}$ $4+7$

25. $(4 - 2^2 + 5)w = 25$

$(4-4+5)w = 25$

$5w = 25$

$w = 5$

26. $7 + x - (3 + 32 \div 8) = 3$

$7 + x - 7 = 3$

$+7 \quad +7$

$7 + x = 10$

$-7 \quad -7$

$x = 3$

29. $6k + (3 \cdot 10 - 8) = (2 \cdot 3)k + 22$

30. $(3 \cdot 5)t + (21 - 12) = 15t + 3^2$

31 $(2^4 - 3 \cdot 5)q + 13 = (2 \cdot 9 - 4^2)q + \left(\frac{3 \cdot 4}{12} - 1\right)$

$(16 - 15)$ $(18 - 16)$ $\frac{12}{12}$ 1

$1 \cdot q + 13 = 2q + 0$

$q + 13 = 2q$

$? + 13 = 2 \cdot 13$

$\{5, 8, 13, 20\}$

Make a table of values for each equation if the replacement set is {−2, −1, 0, 1, 2}.

37. $y = 3x - 2$

38. $3.25x + 0.75 = y$

$y = 3x - 2$

−2	$y = 3 \cdot -2 + -2$, $-6 + -2$, -8
−1	$y = 3 \cdot -1 + -2$, -5
0	$y = 3 \cdot 0 + -2$, -2
1	$3 \cdot 1 - 2$, 1
2	$3 \cdot 2 - 2$, 4

$3.25x + 0.75 = y$

−2	−5.75
−1	−2.5
0	0.75
1	4.00
2	7.25

Solve each equation using the given replacement set.

39. $t - 13 = 7$; {10, 13, 17, 20}

40. $14(x + 5) = 126$; {3, 4, 5, 6, 7}