

Algebra I Worksheet #3 Unit 4 selected solutions

Solve for x.

2. $3(x + 2) = c$	4. $a(x + b) = c$	6. $4(x - 3) = c$	8. $a(x - b) = c$
$3x + 6 = c$	$ax + ab = c$	$4x - 12 = c$	$ax - ab = c$
$3x = c - 6$	$ax = c - ab$	$4x = c + 12$	$ax = c + ab$
$x = \frac{c - 6}{3}$	$x = \frac{c - ab}{a}$	$x = \frac{c + 12}{4}$	$x = \frac{c + ab}{a}$

10. $6x + b = 4x + d$	11. $ax + b = cx + d$
$2x + b = d$	$ax - cx = d - b$
$2x = d - b$	$(a - c)x = d - b$
$x = \frac{d - b}{2}$	$x = \frac{d - b}{a - c}$

Solve each formula for the indicated variable.

24. $P = 2L + 2W$ solve for W	26. $V = \pi r^2 h$ solve for h
$2L + 2W = P$	$\pi r^2 h = V$
$2W = P - 2L$	$(\pi r^2)h = V$
$W = \frac{P - 2L}{2}$	$h = \frac{V}{\pi r^2}$
30. $C = P + a(n - 10)$ solve for n	33. $R(a + b) = ab$ solve for b
$C = P + an - 10a$	$Ra + Rb = ab$
$P + an - 10a = C$	$Ra = ab - Rb$
$an = C - P + 10a$	$(a - R)b = Ra$
$n = \frac{C - P + 10a}{a}$	$b = \frac{Ra}{a - R}$