

Unit 1 Test — Answer Key

One-Step, Two-Step, Multi-Step & Literal Equations

FOR TEACHER / SELF-CHECK USE

This test was written to cover Unit 1's topics (one-step, two-step, and multi-step linear equations, literal equations, and proportions). Every solution below has been independently verified.

1	Subtract 7 from both sides: $x = -3 - 7$. Answer: A — $x = -10$
2	Add 5: $4x = 16$. Divide by 4: $x = 4$. Answer: A — $x = 4$
3	Subtract x : $2x + 2 = -8$. Subtract 2: $2x = -10$. Divide by 2: $x = -5$. Answer: A — $x = -5$
4	Multiply both sides by 2: $2A = bh$. Divide by b : $h = 2A/b$. Answer: h = $2A/b$
5	Distribute: $2x - 6 = 4x + 2$. Subtract $2x$: $-6 = 2x + 2$. Subtract 2: $-8 = 2x$. Divide by 2: $x = -4$. Answer: A — $x = -4$
6	Cross-multiply: $20x = 4(15) = 60$. Divide by 20: $x = 3$. Answer: A — $x = 3$
7	Subtract 5: $x/3 = 4$. Multiply by 3: $x = 12$. Answer: x = 12
8	Distribute: $2x + 8 = 2x + 9$. Subtract $2x$: $8 = 9$, which is false for any x . Answer: B — No solution
9	Subtract $3x$: $2y = 12 - 3x$. Divide by 2: $y = (12 - 3x)/2 = 6 - 1.5x$. Answer: $y = 6 - 1.5x$ (equivalently $y = (12 - 3x)/2$)
10	Let the integers be $n, n+1, n+2$. $n + (n+1) + (n+2) = 72 \rightarrow 3n + 3 = 72 \rightarrow 3n = 69 \rightarrow n = 23$. Answer: 23, 24, and 25