

Grade 6 · One-Step Equations · Worksheet

Answer Key

Common Core 6.EE.B.5, 6.EE.B.6, 6.EE.B.7 · mathovore.fr

This answer key shows a full worked solution for each of the 10 problems on the one-step equations worksheet. Each solution names the inverse operation, and every final answer is in bold, so students can compare their work and find any slips.

Grade 6 Common Core: 6.EE.B.5 · 6.EE.B.6 · 6.EE.B.7

Problem 1: Is It a Solution

- a. $7+8=15$, which is true. **Yes, it is a solution.**
- b. $3\times 5=15$, and $15\neq 18$. **No, it is not a solution.**
- c. $3.5+2.5=6$, which is true. **Yes.**
- d. $4\times 2.5=10$, which is true. **Yes.**

Problem 2: Addition Equations

- a. Subtract 9: $x=21-9=12$
- b. $x=30-14=16$
- c. $x=17-5=12$
- d. $x=50-26=24$

Problem 3: Multiplication Equations

- a. Divide by 6: $x=42\div 6=7$
- b. $x=72\div 9=8$
- c. $x=54\div 6=9$
- d. $x=60\div 12=5$

Problem 4: Addition with Decimals

- a. $x=9.1-3.4=5.7$
- b. $x=2.5-0.75=1.75$
- c. $x=12.6-4.9=7.7$
- d. $x=0.5-0.08=0.42$

Problem 5: Multiplication with Decimals

- a. $x=12.5\div 5=2.5$

- b. $x = 3.2 \div 0.4 = 8$
- c. $x = 9 \div 1.5 = 6$
- d. $x = 6 \div 0.25 = 24$

Problem 6: Equations with Fractions

- a. $x = \frac{7}{8} - \frac{1}{4} = \frac{7}{8} - \frac{2}{8} = \frac{5}{8}$
- b. $x = 1 - \frac{2}{5} = \frac{5}{5} - \frac{2}{5} = \frac{3}{5}$
- c. $x = \frac{3}{4} \div 3 = \frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$
- d. $x = \frac{3}{8} \div \frac{1}{2} = \frac{3}{8} \times 2 = \frac{6}{8} = \frac{3}{4}$

Problem 7: Writing Equations

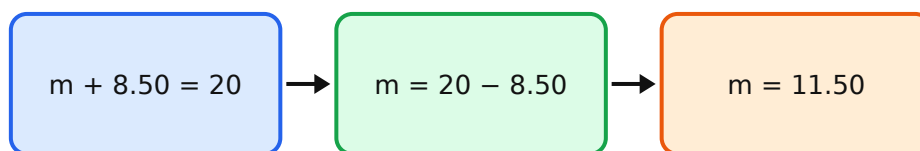
- a. $n + 7 = 25$, so $n = 25 - 7 = 18$
- b. $6n = 4.2$, so $n = 4.2 \div 6 = 0.7$
- c. $n + \frac{3}{4} = 2$, so $n = 2 - \frac{3}{4} = \frac{8}{4} - \frac{3}{4} = \frac{5}{4}$, or $1\frac{1}{4}$
- d. $8n = 100$, so $n = 100 \div 8 = 12.5$

Problem 8: School Store Savings

Let m be the dollars she had at first: $m + 8.50 = 20.00$.

Subtract 8.50: $m = 20.00 - 8.50 = 11.50$. Check: $11.50 + 8.50 = 20.00$.

Answer: \$11.50



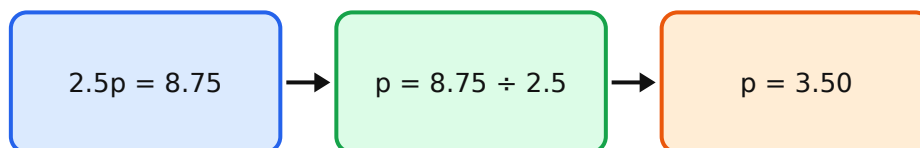
Priya's solution.

Problem 9: Farmers Market Apples

The cost of 2.5 pounds at p dollars per pound is $2.5p = 8.75$.

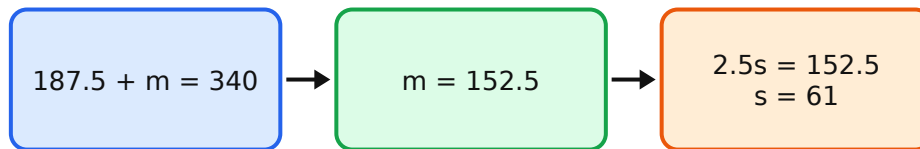
Divide by 2.5: $p = 8.75 \div 2.5 = 3.5$. Check: $2.5 \times 3.5 = 8.75$.

Answer: \$3.50 **per pound**



Problem 10: Road Trip

- a. $187.5 + m = 340$, so $m = 340 - 187.5 = 152.5$ **miles**
- b. Distance equals speed times time: $2.5s = 152.5$, so $s = 152.5 \div 2.5 = 61$ **miles per hour**
- c. $2.5 \times 61 = 152.5$, which matches the distance left. The solution is **correct**.



Road trip solution.