

Grade 6 · One-Step Equations · Quiz

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

Name: _____ Date: ____/____/____ Score: _____

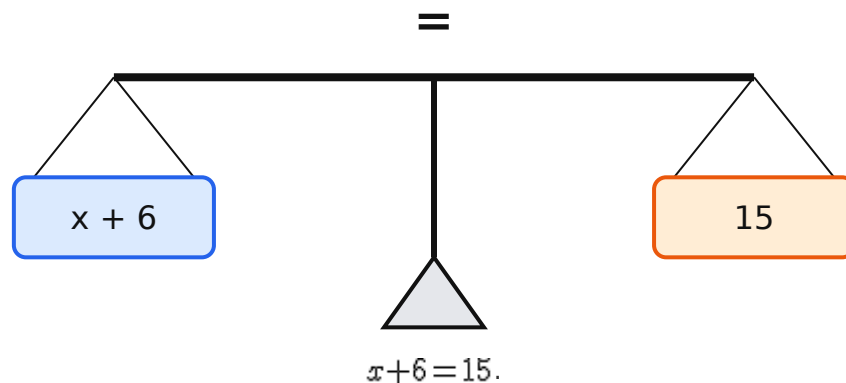
This 10-question multiple-choice quiz checks one-step equations in Grade 6: solutions, inverse operations, decimals, fractions, and equations for word problems (6.EE.B.5 to 6.EE.B.7). Pick one answer for each question and read the explanation.

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

Questions

Question 1

What is the solution of $x+6=15$?



- A. $x = 21$
- B. $x = 90$
- C. $x = 2.5$
- D. $x = 9$

Question 2

What is the solution of $5x = 45$?

- A. $x = 40$
- B. $x = 50$
- C. $x = 225$
- D. $x = 9$

Question 3

What is the solution of $x+3.5=8$?

- A. $x=11.5$
- B. $x=5.5$
- C. $x=4.5$
- D. $x=28$

Question 4

What is the solution of $0.4x=2$?

- A. $x=0.8$
- B. $x=1.6$
- C. $x=50$
- D. $x=5$

Question 5

What is the solution of $x+\frac{1}{2}=\frac{5}{6}$?

- A. $x=\frac{1}{3}$
- B. $x=\frac{4}{3}$
- C. $x=\frac{2}{3}$
- D. $x=\frac{1}{6}$

Question 6

Which equation matches the sentence "7 more than a number n is 20"?

- A. $7n=20$
- B. $n+7=20$
- C. $n-7=20$
- D. $20+n=7$

Question 7

Sofia buys 4 notebooks for in all. Which equation finds the price n of one notebook?



4 notebooks cost in all.

- A. $4n=10$
- B. $n+4=10$
- C. $10n=4$
- D. $n=4+10$

Question 8

Which equation has the solution $x=8$?

- A. $x+9=16$
- B. $3x=21$
- C. $x+5=13$
- D. $2x=4$

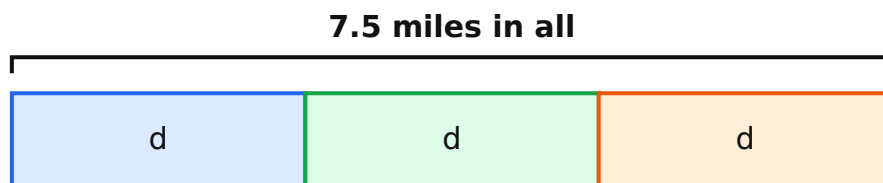
Question 9

Aisha has \$.25 and wants a book that costs \$13.25. Solving $x+13.25=20$, how much more does she need?

- A. \$.25
- B. \$.75
- C. \$2.50
- D. \$2.75

Question 10

Liam runs the same distance d on each of 3 days and runs 7.5 miles in all. What is d ?



Three equal runs.

- A. 2.5 miles
- B. 22.5 miles
- C. 4.5 miles
- D. 10.5 miles

Answer key

1. **D** - Subtract 6 from both sides: $x = 15 - 6 = 9$. Adding 6 gives the mistaken 21.
2. **D** - Divide both sides by 5: $x = 45 \div 5 = 9$. Multiplying 45×5 gives the mistaken 225.
3. **C** - $x = 8 - 3.5 = 4.5$. Adding the numbers gives 11.5, which does not undo the addition.
4. **D** - $x = 2 \div 0.4 = 5$, since $0.4 \times 5 = 2$. Multiplying 2×0.4 gives the mistaken 0.8.
5. **A** - $x = \frac{5}{6} - \frac{3}{6} = \frac{2}{6} = \frac{1}{3}$. Adding the fractions gives $\frac{4}{3}$, the opposite operation.
6. **B** - "\"More than\" means addition, so the equation is $n + 7 = 20$. Writing $7n$ treats it as multiplication.
7. **A** - Four notebooks at n dollars each cost $4n$ dollars, so $4n = 10$ and $n = 2.50$.
8. **C** - Check: $8 + 5 = 13$ is true. The other equations have solutions 7, 7, and 2.
9. **B** - $x = 20 - 13.25 = 6.75$. Adding the amounts gives .25, and .25 and .25 come from subtraction slips.
10. **A** - Solve $3d = 7.5$ by dividing: $d = 7.5 \div 3 = 2.5$. Multiplying gives 22.5, and subtracting gives 4.5.

Remember:

- A solution makes the equation true when substituted: $x = 12$ solves $x + 7 = 19$.
- To solve $x + p = q$, subtract p from both sides: $x = q - p$.
- To solve $px = q$, divide both sides by p : $x = q \div p$.
- Equations can use whole numbers, fractions, and decimals, and the same steps still work.