

Grade 7 - Equivalent Linear Expressions - Quiz

Common Core 7.EE.A.1, 7.EE.A.2 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

Answer all 10 multiple-choice questions on adding, subtracting, factoring, and expanding linear expressions, and rewriting expressions in equivalent forms. Pick the single best answer, then read the explanation to see why it is right and which common mistake each wrong choice shows. A score of 8 or more means you are ready for the test.

Grade 7 · Common Core State Standards: **7.EE.A.1, 7.EE.A.2**

Questions

Question 1

Which expression is equivalent to $4x+7x-3$?

- A. $11x-3$
- B. $11x^2-3$
- C. $8x$
- D. $11x+3$

Question 2



Which is the expanded form of $5(2y+3)$?

- A. $10y+3$
- B. $7y+8$
- C. $2y+15$
- D. $10y+15$

Question 3

What is $-4(x-6)$ expanded?

- A. $-4x-24$
- B. $-4x-6$
- C. $-4x+24$

D. $4x-24$

Question 4

Term	Factors
14a	$7 \times 2a$
21	7×3

Which shows $14a+21$ factored?

- A. $7(2a+21)$
- B. $14(a+21)$
- C. $3(a+7)$
- D. $7(2a+3)$

Question 5

What is $(6x+2)-(x-5)$?

- A. $5x+7$
- B. $5x-3$
- C. $7x-3$
- D. $5x+3$

Question 6

Which expression is NOT equivalent to $3x+6$?

- A. $3(x+2)$
- B. $3(x+6)$
- C. $x+2x+6$
- D. $6+3x$

Question 7

Price	p
Total	p $0.06p$

A price p has 6% tax. Which expression gives the total?

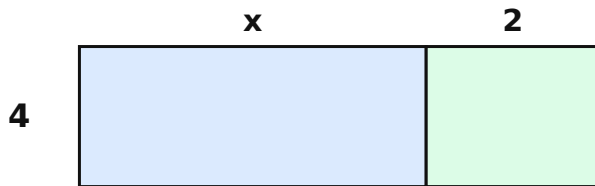
- A. $0.06p$
- B. $1.06p$
- C. $p+6$
- D. $6p$

Question 8

What is $\frac{1}{2}x + \frac{1}{3}x$ in simplest form?

- A. $\frac{5}{6}x$
- B. $\frac{1}{6}x$
- C. $\frac{1}{6}x$
- D. $\frac{5}{6}x$

Question 9



A rectangle is 4 wide and $x+2$ long. Which expression is its area?

- A. $4x+8$
- B. $4x+2$
- C. $x+6$
- D. $8x$

Question 10

Which pair of expressions is equivalent?

- A. $2(x+3)$ and $2x+3$
- B. $2(x+3)$ and $2x+6$
- C. $3(x-2)$ and $3x-2$
- D. $4(x+1)$ and $4x+1$

Answers

1. **A** - Combine the like terms $4x+7x=11x$. The constant keeps its sign.
2. **D** - Multiply both terms by 5. Forgetting to multiply the constant gives $10y+3$.
3. **C** - The negative times -6 is positive 24. A sign error gives -24.
4. **D** - The GCF is 7: $14a\div7=2a$ and $21\div7=3$.
5. **A** - Subtracting changes the signs: $6x+2-x+5=5x+7$.
6. **B** - $3(x+6)=3x+18$. The others all equal $3x+6$.
7. **B** - Total = $p+0.06p=1.06p$.
8. **C** - $\frac{3}{6}+\frac{2}{6}=\frac{5}{6}$. Adding the denominators is a common error.
9. **A** - Area = $4(x+2)=4x+8$.
10. **B** - Only the first pair has the factor multiplied by both terms. The other pairs multiply only the first term.

Remember

- Like terms have the same variable part and can be combined by adding coefficients.
- Distributive property: $a(b+c)=ab+ac$.
- Factor by pulling out the greatest common factor: $6x+12=6(x+2)$.
- Subtracting an expression means adding its opposite.
- Adding 5% tax to a price p gives $p+0.05p=1.05p$.