

Grade 6 · Writing and Evaluating Algebraic Expressions · Quiz

Common Core 6.EE.A.2, 6.EE.A.3, 6.EE.A.4 · mathovore.fr

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

This 10-question multiple-choice quiz checks algebraic expressions in Grade 6: terms and coefficients, translating words, evaluating, and equivalent expressions (6.EE.A.2 to 6.EE.A.4). Pick one answer for each question and read the explanation.

Grade 6 Common Core: 6.EE.A.2 · 6.EE.A.3 · 6.EE.A.4

Questions

Question 1

What is the coefficient of x in $7x+3$?

- A. 3
- B. 7
- C. x
- D. 10

Question 2

Which expression means 5 less than n ?

- A. $n-5$
- B. $5-n$
- C. $5n$
- D. $n+5$

Question 3

Which expression means twice the sum of x and 4?

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

Question 4

What is the value of $4x+3$ when $x=5$?

- A. 35
- B. 23
- C. 20
- D. 12

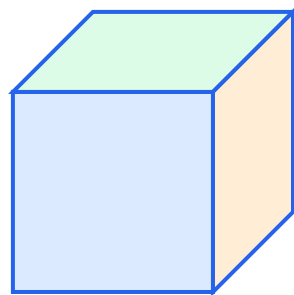
Question 5

What is the value of $3n^2$ when $n = 4$?

- A. 144
- B. 24
- C. 48
- D. 16

Question 6

What is the surface area of a cube with edge 3 ft, using $A = 6s^2$?



all edges equal

3 ft

Cube with edge 3 ft.

- A. 18 ft^2
- B. 27 ft^2
- C. 54 ft^2
- D. 324 ft^2

Question 7

Which expression is equivalent to $5(x+2)$?



5 multiplies the whole sum.

- A. $5x+10$
- B. $5x+2$

- C. $x+10$
- D. $5x+7$

Question 8

What is $6a+4+2a$ in simplest form?

- A. $12a$
- B. $8a^2+4$
- C. $8a+4$
- D. $6a+6$

Question 9

Which expression is equivalent to $12x+18$?

- A. $6(2x+18)$
- B. $6(2x+9)$
- C. $12(x+3)$
- D. $6(2x+3)$

Question 10

A taxi charges plus per mile. Which expression gives the cost for m miles?



Taxi rates.

- A. $4m+2$
- B. $2m+4$
- C. $6m$
- D. $2(m+4)$

Answer key

1. **B** - The coefficient is the number multiplied by the variable, 7. The number 3 is the constant term.
2. **A** - 5 less than n is $n-5$. Writing $5-n$ reverses the order of subtraction.
3. **D** - The sum $x+4$ is doubled, so parentheses are needed. $2x+4$ doubles only x .
4. **B** - $4 \times 5 + 3 = 20 + 3 = 23$. Adding $4+3$ first gives the mistaken 35.
5. **C** - Square first: $4^2 = 16$, then $3 \times 16 = 48$. Computing $(3 \times 4)^2$ gives the mistaken 144.
6. **C** - $A = 6 \times 3^2 = 6 \times 9 = 54$. The value 27 is the volume, and 324 comes from squaring 6×3 .
7. **A** - Distribute the 5 to both terms: $5x+10$. Multiplying only the first term gives $5x+2$.
8. **C** - Combine only like terms: $6a+2a=8a$. The constant 4 cannot be combined with a term that has a .
9. **D** - Factor out 6 from both terms: $12x \div 6 = 2x$ and $18 \div 6 = 3$. Dividing only one term by 6 gives a wrong result.
10. **B** - The rate multiplies the miles, and the is added once: $2m+4$. Swapping the numbers gives $4m+2$.

Remember:

- In $7x+2$, the terms are $7x$ and 2, the coefficient is 7, and the constant is 2.
- Key words: sum means add, difference means subtract, product means multiply, quotient means divide.
- For a cube with edge s , volume is $V = s^3$ and surface area is $A = 6s^2$.
- The distributive property says $a(b+c) = ab+ac$, and like terms combine: $5x+2x=7x$.