

Grade 6 - Writing and Reading Algebraic Expressions - Answer Key

Common Core 6.EE.A.2a, 6.EE.A.2b · maths-pdf.fr/en/

Check each expression here. The solutions show how key words map to operations, name the terms and coefficients, and give the final expression in bold. Tape diagrams and tables support several answers.

Grade 6 · Common Core State Standards: **6.EE.A.2a, 6.EE.A.2b**

Exercise 1 - Sum

"Sum" means add.

$$x+7$$

Exercise 2 - Decreased by

"Decreased by" means subtract 5 from y.

$$y-5$$

Exercise 3 - Times a number

Write the coefficient 6 next to the variable.

$$6n$$

Exercise 4 - Quotient

The first quantity named is the dividend.

$$\frac{m}{4} \text{ (or } m \div 4 \text{)}$$

Exercise 5 - Less than

"8 less than k" means k with 8 taken away. The order is reversed from the words.

Exercise 6 - Twice a sum

The sum is $n+3$. Twice it means multiply by 2, so use parentheses.

$$2(n+3)$$



Two groups of $n + 3$.

Exercise 7 - Product with a difference

The difference of x and 2 is $x-2$. The product of 5 and that is $5(x-2)$.

$$5(x-2)$$

Exercise 8 - Terms and coefficient

Terms are the parts added: $7x$ and 3.

The coefficient of x is 7, and the constant term is 3.

terms $7x$, 3; **coefficient** 7; **constant** 3

Exercise 9 - Three terms

Terms: $4a$, $9b$, 2.

Coefficients: 4 (of a) and 9 (of b). Constant: 2.

3 terms; coefficients 4 and 9; constant 2

Exercise 10 - Read a product

It is the *product* of 3 and the sum $x+5$.

Factors: 3 and $(x+5)$

Exercise 11 - Words for a difference

Sample answers: "9 less than twice a number n " or "the difference of 2 times n and 9."

9 less than twice n

Exercise 12 - Words for a quotient

$\frac{n}{3}$ is the quotient of n and 3. Adding 4 makes it a sum.

the sum of the quotient of n and 3, and 4

Exercise 13 - Sum of a product

"4 times a " is $4a$. The sum of that and 7 is $4a+7$.

$4a+7$

Exercise 14 - Hourly pay

Pay = rate times hours: $12h$.

For 5 hours: $12 \times 5 = 60$.

$12h$; **\$60.00**

Hours (h)	1	5	h
Pay	\$12	\$60	$12h$

The expression $12h$ gives the pay for h hours.

Exercise 15 - Notebooks and a pen

The notebooks cost $3n$ dollars. Adding the pen gives $3n+2$ dollars.

$3n+2$

Notebooks (n)	1	2	3	n
Cost	\$5	\$8	\$11	$3n + 2$

Cost of notebooks and one pen.

Exercise 16 - More stickers

"5 more than x " means add 5.

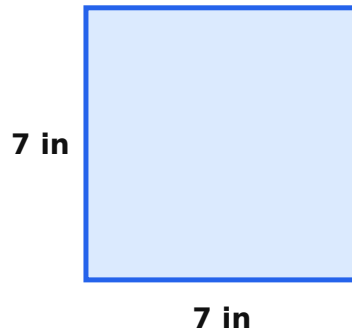
$$x+5$$

Exercise 17 - Perimeter of a square

The perimeter is $s + s + s + s$, which is $4s$.

$$4 \times 7 = 28$$

$4s$; **28 inches**



Four sides of 7 inches make 28 inches.

Exercise 18 - Distance

Distance = rate times time: $14t$.

$$14 \times 3 = 42$$

$14t$; **42 miles**

Exercise 19 - Read a product of a sum

It is 5 times the sum of 2 times x and 1.

Factors: 5 and $(2x+1)$. Terms inside: $2x$ and 1.

product of 5 and the sum $2x+1$

Exercise 20 - Tickets

Cost: $8a+5c$.

$$8 \times 3 + 5 \times 4 = 24 + 20 = 44$$

$8a+5c$; **\$44.00**