



Grade 7

Topic: Algebraic Expressions

Instructions

Simplify, evaluate, or translate the following algebraic expressions. Show all your work.

Practice Problems

1. Simplify the following algebraic expressions.

- | | |
|--------------------|----------------------------|
| (i) $2x + 3x - 4$ | (iv) $6y - 2(y + 5)$ |
| (ii) $5a - 2a + 7$ | (v) $3(p + 2) - p$ |
| (iii) $4(2m - 3)$ | (vi) $(5x - 2) + (3x + 6)$ |

2. Evaluate the expressions for the given values.

- | | |
|----------------------------------|------------------------------------|
| (i) $3x + 2$, when $x = 4$ | (iv) $4b - b^2$, when $b = 1$ |
| (ii) $5a^2 - a$, when $a = -1$ | (v) $7t + 2$, when $t = -2$ |
| (iii) $2m^2 + 3m$, when $m = 2$ | (vi) $x^2 - 3x + 5$, when $x = 3$ |

3. Write algebraic expressions for each phrase.

- (i) 7 more than twice a number n .
- (ii) The difference between a number x and 9.
- (iii) Three times the sum of a number y and 4.
- (iv) Half of the product of a number p and 6.
- (v) The square of a number m decreased by 8.

4. Simplify using the distributive property.

(i) $2(x + 5)$

(ii) $-3(a - 4)$

(iii) $5(m + 3n)$

(iv) $4(p - 2q)$

Multiple-Choice Questions

1. Simplify: $4x + 6x - 2$

A. $10x - 2$

B. $10x + 2$

C. $10x$

D. $8x - 2$

2. Evaluate $2x^2 + 3x$ when $x = 2$

A. 10

B. 14

C. 16

D. 12

3. Which is the correct expression for “five times a number minus 7”?

A. $5n + 7$

B. $5(n - 7)$

C. $5n - 7$

D. $n - 7$

4. What is the simplified form of $3(x + 4)$?

A. $3x + 12$

B. $3x + 4$

C. $3x - 4$

D. $x + 12$

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