Multiple choice questions - Algebraic notation and simplifying expressions

Year: Year 7 · 10

Question 1 What is $5 \times y$ in algebraic notation?

- ◯ **A.** $5y$
- ◯ **B.** $y5$
- ◯ **C.** y^5
- ◯ **D.** $5 + y$

Question 2 What does a^2 mean?

- ◯ **A.** $2 \times a$
- ◯ **B.** $a \times a$
- ◯ **C.** $a + 2$
- ◯ **D.** $a + a$

Question 3 Find $4x - 1$ when $x = 3$.

- ◯ **A.** 13
- ◯ **B.** 3
- ◯ **C.** 11
- ◯ **D.** 12

Question 4 Find x^2 when $x = -5$.

- ◯ **A.** -25
- ◯ **B.** -10
- ◯ **C.** 10
- ◯ **D.** 25

Question 5 Simplify $7a + 2b - 3a + b$.

- ◯ **A.** $4a + 3b$
- ◯ **B.** $4a + b$
- ◯ **C.** $10a + 3b$
- ◯ **D.** $7ab$

Question 6 Simplify $3x \times 4$.

- ◯ **A.** $7x$
- ◯ **B.** $12x$
- ◯ **C.** $34x$

- ◯ **D.** 12

Question 7 Simplify $2x + 3x^2$.

- ◯ **A.** $5x^3$
- ◯ **B.** $5x^2$
- ◯ **C.** It cannot be simplified
- ◯ **D.** $5x$

Question 8 What is the coefficient of y in $8 - 6y$?

- ◯ **A.** 6
- ◯ **B.** 8
- ◯ **C.** -8
- ◯ **D.** -6

Question 9 A pen costs c pence. What is the cost of 5 pens and a 30 pence notebook?

- ◯ **A.** $5c + 30$
- ◯ **B.** $35c$
- ◯ **C.** $5 + c + 30$
- ◯ **D.** $c^5 + 30$

Question 10 Simplify $\frac{20b}{5}$.

- ◯ **A.** $15b$
- ◯ **B.** $4b$
- ◯ **C.** 4
- ◯ **D.** $100b$

Answer grid - Algebraic notation and simplifying expressions

Year: Year 7

Question	Answer	Explanation
1	**A**	Write the number first, with no multiplication sign.
2	**B**	The index 2 means a is multiplied by itself.
3	**C**	4 x 3 = 12, then subtract 1.
4	**D**	(-5) x (-5) = 25.
5	**A**	7a - 3a = 4a and 2b + b = 3b.
6	**B**	Multiply the numbers: 3 x 4 = 12, keep the x.
7	**C**	x and x squared are not like terms.
8	**D**	The sign belongs to the term, so the coefficient is -6.
9	**A**	Five pens cost 5c and the notebook costs 30.
10	**B**	20 divided by 5 is 4.