

Unit 0 Test — Answer Key

Number Systems, Order of Operations & Algebraic Expressions

FOR TEACHER / SELF-CHECK USE

This test was written to cover Unit 0's topics (order of operations, real number classification, properties, integer exponents, and scientific notation). Every solution below has been independently verified.

1	$(8-3)^2 = 25$. $2(25) = 50$. $50 \div 5 = 10$. $6+10 = 16$. Answer: A — 16
2	-7 has no fractional/decimal part (integer) and can be written as $-7/1$ (rational). It is not whole or natural since those exclude negative numbers. Answer: C — Integer and rational number
3	Multiplying a sum by a factor and distributing it to each term is the Distributive Property. Answer: B — Distributive Property
4	$3(-2)^2 - 2(-2) + 5 = 3(4) + 4 + 5 = 12 + 4 + 5$. Answer: 21
5	Product of powers: add exponents. $5 + 3 = 8$. Answer: A — x^8
6	$2^{-3} = 1/2^3 = 1/8$. Answer: B — $1/8$
7	Move the decimal point 4 places right: $0.000452 = 4.52 \times 10^{-4}$. Answer: 4.52×10^{-4}
8	$(3 \times 2) \times (10^4 \times 10^3) = 6 \times 10^7$. Answer: A — 6×10^7
9	$4(2x-3) = 8x - 12$. $8x - 12 - 5x + 7 = (8x-5x) + (-12+7) = 3x - 5$. Answer: $3x - 5$
10	Perimeter = $2(\text{length} + \text{width}) = 2[(2x+3) + (x-1)] = 2[3x+2]$. Answer: $6x + 4$