Putnam County Algebra Exit Exam (Sample)

Select the **best** answer for each question.

1. Simplify

$$-8-|-6| \cdot 3 \cdot (-4)$$

A. 65
B. 64
C. 70
D. 62

Simplify. Your answer should contain only positive exponents.

2. $n^{-4} \cdot 2n^3 \cdot 4n^2$

A. $3n^9$
B. n
C. $8n$
D. 4

3. $r^3 \cdot r^2$

A. $4r^3$
B. r^5
C. $6r^8$
D. $16r^5$

4. $4x \cdot 2x^{-2}$

A. $\frac{8}{x}$
B. $6x^8$
C. $\frac{12}{x}$
D. $16x^3$

5. Which statement is FALSE?

A. An algebraic expression contains at least one variable and at least one mathematical operation.

B. A numerical expression contains only numbers and mathematical operations.

C. A variable stands for a known number: its value is always the same.

D. An equation is a sentence that contains an equal sign.

6. Choose the correct expression for "the sum of two and the quotient of r and s.

A. $2+\frac{r}{s}$

B. $\frac{r+2}{s}$

C. $\frac{r}{2+s}$

D. $\frac{r}{2}+s$

7. Simplify $(a-4b)(a+4b)$

A. $a^2-8ab+16b$

B. a^2-16b^2

C. a^2+16b^2

D. $a^2+8ab-16b^2$

8. Factor completely. $3x^2-12x^3$

A. $3(x^2-4x^3)$

B. $3x^2(1-4x)$

C. $3x^2(-4x)$

D. $3x(x-4)$

9. Simplify the expression. $\frac{3a-4b}{6b}+\frac{a-2b}{6b}$

A. $\frac{2a-3b}{3b}$

B. $\frac{2a+b}{2b}$

C. $\frac{-7ab+a+6b}{3b}$

D. $\frac{a-2b}{6b}$

10. Simplify

$(3x^2+9x+2)-(-3+7x^2)$

A. $10x^2+9x$

B. $-4x^2+9x+5$

C. $10x^2-1$

D. $10x^2+9x+5$

11. Simplify

$$\sqrt{45}$$

A. $5\sqrt{5}$
B. $3\sqrt{5}$
C. $4\sqrt{2}$
D. $9\sqrt{5}$

12. Simplify

$$\sqrt{50}$$

A. $2\sqrt{3}$
B. $2\sqrt{5}$
C. $3\sqrt{5}$
D. $5\sqrt{2}$

13. Give the degree of the polynomial.

$$5x^2y^3 - 2x^3y^3 + 7x^2 - 7y^3$$

A. 2
B. 5
C. 6
D. 3