Math 2A Name_____ ID: 1

Final Review Part 2

Date_____ Period____

Evaluate each expression using order of operations (PEMDAS).

1) $6 + 1 - 5 \div 5$

A) 6 B) 2
C) 0 D) 1

2) $(14 - (1 + 1)) \div 4$

A) 6 B) 3
C) 0 D) 1

Write each expression in radical form.

3) $n^{\frac{3}{5}}$

A) $(\sqrt[5]{n})^3$ B) $(\sqrt[3]{6n})^5$
C) $(\sqrt[4]{2n})^7$ D) $(\sqrt[3]{6n})^2$

4) $(7n)^{\frac{2}{3}}$

A) $(\sqrt{6n})^3$ B) $(\sqrt{2n})^5$
C) $(\sqrt{5n})^5$ D) $(\sqrt[3]{7n})^2$

Write each expression in exponential form.

5) $(\sqrt{7x})^5$

A) $x^{\frac{7}{5}}$ B) $x^{\frac{7}{6}}$
C) $(5x)^{\frac{1}{3}}$ D) $(7x)^{\frac{5}{2}}$

6) $(\sqrt[4]{10p})^7$

A) $p^{\frac{2}{3}}$ B) $(10p)^{\frac{7}{4}}$
C) $(5p)^{\frac{5}{3}}$ D) $(7p)^{\frac{2}{3}}$

Simplify using rules of exponents.

7) $((2x)^3 \cdot x^0)^2$

A) $64x^6$ B) $3x^5$
C) $54x^{11}$ D) $4x^8$

8) $(3x^2)^2 \cdot x$

A) $4x^4$ B) $9x^5$
C) $8x^5$ D) $8x^{12}$

Add or subtrract the polynomials.

9) $(6x^4 - 7x^2) + (5x^3 - 5x^2)$

A) $-5x^4 + 6x^3 - 12x^2$
B) $-5x^4 + 5x^3 - 12x^2$
C) $x^4 + 5x^3 - 12x^2$
D) $6x^4 + 5x^3 - 12x^2$

10) $(6a^4 - 7a^3) - (8a^4 - 6a^3)$

A) $-2a^4 - 3a^3$ B) $-2a^4 - a^3$
C) $-7a^4 - 3a^3$ D) $-5a^4 - 3a^3$

Multiply the polynomials.

11) $(4n - 2)(3n + 6)$

A) $21n^2 - 62n + 16$
B) $12n^2 - 30n + 12$
C) $12n^2 + 18n - 12$
D) $21n^2 + 16$

12) $5(3p + 2)$

A) $24p - 20$ B) $16p - 32$
C) $15p + 10$ D) $28p + 16$

Factor each quadratic.

13) $x^2 + 5x - 24$

A) $(x - 8)(x - 3)$
B) $(x + 7)(x - 10)$
C) $(x + 8)(x - 3)$
D) $(x + 4)(x - 6)$

14) $x^2 + 19x + 90$

A) $(x + 30)(x + 3)$
B) $(x + 9)(x + 10)$
C) $(x + 9)(x - 10)$
D) $(x - 9)(x + 10)$

Solve each equation by factoring. (Factor and then find the zeros)

15) $m^2 - 4m - 5 = 0$

A) $\{-3, 2\}$ B) $\{-7, -5\}$
C) $\{5, -1\}$ D) $\{-7, 8\}$

16) $p^2 - 5p = 0$

A) $\{5, 0\}$ B) $\{-1, 3\}$
C) $\{-8, 0\}$ D) $\{-4, -6\}$

17) $5x^2 - 7x - 6 = 0$

A) $\left\{-\frac{1}{5}, -2\right\}$ B) $\left\{-\frac{3}{5}, 2\right\}$
C) $\left\{-\frac{4}{7}, 2\right\}$ D) $\left\{\frac{7}{8}, -2\right\}$

18) $7x^2 + x - 6 = 0$

A) $\left\{\frac{6}{7}, -1\right\}$ B) $\left\{\frac{8}{5}, 1\right\}$
C) $\left\{-\frac{6}{7}, 6\right\}$ D) $\left\{-\frac{6}{7}, -8\right\}$

Evaluate each function.

19) $k(x) = x^3 + 3x^2$; Find $k(2)$

A) 200 B) 20
C) 4 D) 54

20) $k(x) = 2x - 4$; Find $k(-3)$

A) 4 B) 8
C) -10 D) 6

Solve each equation by taking square roots.

21) $v^2 = 25$

A) $\{9, -9\}$ B) $\{25, -25\}$
C) $\{5, -5\}$ D) $\{9\}$

22) $v^2 + 10 = 2$

A) $\{2\sqrt{3}\}$
B) $\{12, -12\}$
C) $\{2i\sqrt{3}, -2i\sqrt{3}\}$
D) $\{2i\sqrt{2}, -2i\sqrt{2}\}$

Solve each equation with the quadratic formula.

23) $2k^2 + 5k = 63$

A) $\{0.576, -2.776\}$
B) $\{4.5, -7\}$
C) $\{2.776, -0.576\}$
D) $\{5.822, -10.822\}$

Find the discriminant (b^2 -4ac) of each quadratic equation then state the number and type of solutions.

24) $5a^2 - 4a + 9 = 0$

A) -164; two imaginary solutions
B) -164; two real solutions
C) 196; two real solutions
D) 132; two imaginary solutions

25) $7b^2 - 10b + 4 = 0$

A) 72; one real solution
B) -12; two imaginary solutions
C) 128; two real solutions
D) 72; two imaginary solutions

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