Math 3 Unit 7 Quiz Review

Name: _____   **Date:** _____

1. Simplify: $\dfrac{12x^2 + 4x}{9 - 4x^2} \cdot \dfrac{6x^2 + 7x - 3}{18x^2 - 2}$

   A. $\dfrac{-2x(3x + 1)}{(2x + 3)(3x - 1)}$ B. $\dfrac{2x}{2x - 3}$

   C. $\dfrac{-2x}{2x - 3}$ D. $\dfrac{-2x}{2x + 3}$

2. Simplify: $\dfrac{5x}{x - 1} - \dfrac{2x}{x - 2}$

   A. $\dfrac{3x^2 - 8x}{(x - 1)(x - 2)}$ B. $\dfrac{x^2 - 3x + 2}{(x - 1)(x - 2)}$

   C. $\dfrac{7x^2 + 12x}{(x - 1)(x - 2)}$ D. $\dfrac{3x^2 + 12x}{(x - 1)(x - 2)}$

3. Add: $\dfrac{5}{2x - 8} + \dfrac{3x}{x^2 - 16}$

   A. $\dfrac{11x}{2(x - 4)^2}$ B. $\dfrac{11x}{2(x + 4)(x - 4)}$

   C. $\dfrac{11x + 4}{2(x + 4)(x - 4)}$ D. $\dfrac{11x + 20}{2(x + 4)(x - 4)}$

4. Express $\dfrac{\dfrac{y}{y + 3}}{1 - \dfrac{y}{y + 3}}$ in simplest form.

5. Multiply: $\dfrac{x^2 + 3x - 10}{x^2 - 4} \cdot \dfrac{x + 2}{x^2 - 9}$

   A. $\dfrac{5}{x - 9}$ B. $\dfrac{x + 5}{x - 9}$

   C. $\dfrac{x + 5}{x^2 - 9}$ D. $\dfrac{x - 5}{x^2 + 9}$

6. Simplify: $\dfrac{x^2 + 4x - 21}{x^2 - 6x + 9} \div \dfrac{x + 7}{x - 3}$

   A. 1 B. -1

   C. $\dfrac{(x - 3)^2}{(x + 7)^2}$ D. $\dfrac{x + 7}{x - 3}$

7. Subtract and simplify: $\dfrac{2x + 8}{x^2 + 6x + 8} - \dfrac{x + 16}{x^2 + 8x + 12}$

   A. $\dfrac{x - 8}{-2x - 4}$ B. $\dfrac{x - 4}{(x + 2)(x + 6)}$

   C. $\dfrac{x - 8}{(x + 4)(x + 6)}$ D. $\dfrac{-x - 14}{(x + 2)(x + 6)}$

8. Simplify: $\dfrac{4a - 28}{6} \div \dfrac{a^2 - 49}{3a - 21}$

   A. $\dfrac{2(a - 7)}{(a + 7)}$ B. $\dfrac{2a - 14}{7}$

   C. $\dfrac{a^2 + 4a - 77}{6(3a - 21)}$ D. $\dfrac{a - 8}{6(a - 7)}$

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1.
Answer: A
Objective: A.APR.7

2.
Answer: A
Objective: A.APR.7

3.
Answer: D
Objective: A.APR.7

4.
Answer: $\frac{1}{3}y$
Objective: A.APR.7

5.
Answer: C
Objective: A.APR.7

6.
Answer: A
Objective: A.APR.7

7.
Answer: B
Objective: A.APR.7

8.
Answer: A
Objective: A.APR.7