Student: _____	**Instructor:** Ray Brown	**Assignment:** ch14rev HW
Date: _____	**Course:** M055 Sum17 CAI 10054 G41	

1. Click the link below to watch a video reviewing concepts in this chapter. You are encouraged to watch the video and work problems with the instructor to help ensure your understanding of the material.

   Chapter 14 review video[1]

   ○ True - I understand the concepts.
   ○ False - I am not understanding the concept and intend to seek assistance.

   1: http://www.screencast.com/t/hgbyEYKpQx0

   Answer: True - I understand the concepts.

2. Find any values of the variable that make the expression undefined.

   $$\frac{y + 5}{5}$$

   Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

   ○ **A.** The values of the variable that make the expression undefined are + _____ and - _____ .
   (Simplify your answer. Type an integer or a simplified fraction.)
   ○ **B.** There are no values of the variable that will make the expression undefined.

   Answer: B. There are no values of the variable that will make the expression undefined.

3. Find any values of the variable that make the expression undefined.

   $$\frac{4z}{z^2 - 4}$$

   Select the correct choice below and, if necessary fill in the answer box to complete your choice.

   ○ **A.** The values that would make the expression undefined are + _____ and - _____ . (Type an integer or a fraction.)
   ○ **B.** There are no values of the variable that would make the expression undefined.

   Answer: A.
   The values that would make the expression undefined are + ___2___ and - ___2___ . (Type an integer or a fraction.)

4. If possible, evaluate the expression for the given value of the variable.

$$\frac{4z}{z^2 - 81}, z = -9$$

Select the correct choice below and, if necessary fill in the answer box to complete your choice.

   ○ **A.** The expression is equal to _____ . (Type an integer or a fraction.)
   ○ **B.** The expression is undefined.

   Answer: B. The expression is undefined.

5. If possible, evaluate the expression for the given value of the variable.

$$\frac{4 - x}{x - 4}, x = -4$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

   ○ **A.** The answer is _____ .
   ○ **B.** The answer is undefined.

   Answer: A. The answer is _____ **− 1** _____ .

6. Simplify the expression.

$$\frac{x^2 - 4x}{9x - 36}$$

$$\frac{x^2 - 4x}{9x - 36} = \underline{\qquad\qquad}$$
(Simplify your answer. Use integers or fractions for any numbers in the expression.)

   Answer: $\dfrac{x}{9}$

7. Multiply and simplify to lowest terms.

$$\frac{x^2}{x^2 + 1} \cdot \frac{x + 11}{x}$$

$$\frac{x^2}{x^2 + 1} \cdot \frac{x + 11}{x} = \underline{\qquad\qquad}$$ (Type your answer in factored form.)

   Answer: $\dfrac{x(x + 11)}{x^2 + 1}$

8. Multiply and simplify to lowest terms. Leave your answer in factored form.

$$\frac{y^2 - 4y}{y^2 - 25} \cdot \frac{y + 5}{y - 4}$$

$\dfrac{y^2 - 4y}{y^2 - 25} \cdot \dfrac{y + 5}{y - 4} =$ _____   (Simplify your answer. Type your answer in factored form.)

Answer: $\dfrac{y}{y - 5}$

9. Divide and simplify to lowest terms. Leave your answer in factored form.

$$\frac{t^2 - 64}{t^2 + 64} \div \frac{t + 8}{3}$$

$\dfrac{t^2 - 64}{t^2 + 64} \div \dfrac{t + 8}{3} =$ _____   (Simplify your answer. Type your answer in factored form.)

Answer: $\dfrac{3(t - 8)}{t^2 + 64}$

10. Simplify to lowest terms.

$$\frac{11z}{10z + 3} - \frac{z}{10z + 3}$$

$\dfrac{11z}{10z + 3} - \dfrac{z}{10z + 3} =$ _____

Answer: $\dfrac{10z}{10z + 3}$

11. Simplify to lowest terms.

$$\frac{6x + 9}{2x^2 - 13x - 84} - \frac{5x + 5}{2x^2 - 13x - 84}$$

$\dfrac{6x + 9}{2x^2 - 13x - 84} - \dfrac{5x + 5}{2x^2 - 13x - 84} =$ _____

Answer: $\dfrac{1}{2x - 21}$

12.	Find the least common multiple (LCM).

$x^2 + 9x,\ x^2$

The LCM is _____.	(Simplify your answer.)

Answer: $x^2(x + 9)$

13.	Simplify the expression.

$$\frac{1}{5x} + \frac{3}{4x}$$

$\dfrac{1}{5x} + \dfrac{3}{4x} = $ _____

(Simplify your answer. Use integers or fractions for any numbers in the expression.)

Answer: $\dfrac{19}{20x}$

14.	Simplify the expression. Write your answer in lowest terms and leave it in factored form.

$$\frac{1}{2x - 4} + \frac{1}{x - 2}$$

$\dfrac{1}{2x - 4} + \dfrac{1}{x - 2} = $ _____

Answer: $\dfrac{3}{2(x - 2)}$

15.	Simplify the expression. Write your answer in lowest terms and leave it in factored form.

$$\frac{2y}{y(3y - 1)} + \frac{1}{3y - 1}$$

$\dfrac{2y}{y(3y - 1)} + \dfrac{1}{3y - 1} = $ _____

Answer: $\dfrac{3}{3y - 1}$

16. Perform the indicated operations.

$$\frac{2x}{x-4} + \frac{64}{x^2-16} - \frac{2x}{x+4}$$

$$\frac{2x}{x-4} + \frac{64}{x^2-16} - \frac{2x}{x+4} = \underline{\hspace{3cm}}$$

(Simplify your answer. Type your answer in factored form.)

Answer: $\dfrac{16}{x-4}$

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17. Simplify the complex fraction.

$$\frac{\dfrac{r}{t}}{\dfrac{2r}{t}}$$

$$\frac{\dfrac{r}{t}}{\dfrac{2r}{t}} = \underline{\hspace{3cm}}$$ (Type an integer or a simplified fraction.)

Answer: $\dfrac{1}{2}$

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18. Simplify the complex fraction.

$$\frac{-\dfrac{3}{14x^2}}{\dfrac{12}{35x^3}}$$

$$\frac{-\dfrac{3}{14x^2}}{\dfrac{12}{35x^3}} = \underline{\hspace{3cm}}$$

Answer: $-\dfrac{5x}{8}$

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19. Simplify the complex fraction.

$$\dfrac{\dfrac{9}{4x} + \dfrac{5}{y}}{\dfrac{5}{y} - \dfrac{9}{4x}}$$

$$\dfrac{\dfrac{9}{4x} + \dfrac{5}{y}}{\dfrac{5}{y} - \dfrac{9}{4x}} = \underline{\hspace{2cm}}$$ (Simplify your answer.)

Answer: $\dfrac{20x + 9y}{20x - 9y}$

20. Solve and check your answer.

$$\dfrac{7x}{7x + 8} = \dfrac{-8}{7x + 8}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** The solution is x = _____ . (Simplify your answer.)

○ **B.** There is no solution.

Answer: B. There is no solution.

21. Solve and check your answer.

$$\dfrac{3x}{8} - \dfrac{x}{4} = 1$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** The solution is x = _____ . (Simplify your answer.)

○ **B.** There is no solution.

Answer: A. The solution is x = ____**8**____ . (Simplify your answer.)

22. Solve and check your answer.

$$\frac{5}{x + 10} = \frac{100}{100 - x^2} - 1$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

  ◯ **A.** The solution is x = _____ . (Simplify your answer.)

  ◯ **B.** There is no solution.

Answer: A. The solution is x = _____**5**_____ . (Simplify your answer.)

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23. Solve.

$$\frac{1}{11x} + \frac{7}{x} = 1$$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

  ◯ **A.** The solution is x = _____ .
(Simplify your answer. Type an integer or a fraction.)

  ◯ **B.** There is no solution.

Answer: A. The solution is x = $\dfrac{78}{11}$.(Simplify your answer. Type an integer or a fraction.)

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24. Solve and check your answer.

$$\frac{17}{x + 3} - \frac{7}{x + 3} = 2$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

  ◯ **A.** The solution(s) is(are) x = _____ .
(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

  ◯ **B.** There is no solution.

Answer: A. The solution(s) is(are) x = _____**2**_____ .
(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

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25. Solve and check your answer.

$$\frac{3}{x-1} + \frac{4}{x+1} = \frac{-8}{x^2 - 1}$$

Select the correct choice below and fill in any answer boxes in your choice.

○ **A.** The solution is x = _____ .
  (Use a comma to separate answers as needed.)

○ **B.** There is no solution.

  Answer: B. There is no solution.