Student: _____	**Instructor:** Ray Brown	**Assignment:** ch15 rev 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 15 Review[1]

   ○ True - I understand the concept.

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

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

   Answer: True - I understand the concept.

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2. Write the inequality in interval notation.

   $-2 < x \le 2$

   What is the interval?

   _____

   Answer: $(-2, 2]$

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3. Write the inequality in interval notation.

   $x < 4$

   Write the solution in interval notation.

   _____

   Answer: $(-\infty, 4)$

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4. Write the inequality in interval notation.

   $x \ge -4$ and $x < 2$

   Write the inequality in interval notation.

   _____ (Type your answer in interval notation.)

   Answer: $[-4, 2)$

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5. Write the inequality in interval notation.

   $x \ge 13$ or $x > 10$

   The inequality in interval notation is _____ .

   Answer: $(10, \infty)$

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6. Solve the compound inequality. Write your answer in interval notation.

$x - 1 \le 3$ and $x + 3 \ge -2$

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

- ○ **A.** The solution is _____ . (Type your answer in interval notation.)
- ○ **B.** There is no solution.

Answer: A. The solution is __**[−5,4]**__ . (Type your answer in interval notation.)

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7. Solve the three-part inequality. Write the answer in interval notation.

$-1 \le x + 3 < 2$

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

- ○ **A.** The solution is _____ . (Type your answer in interval notation.)
- ○ **B.** There is no solution.

Answer: A. The solution is __**[−4, −1)**__ . (Type your answer in interval notation.)

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8. Solve the three-part inequality. Write your answer in interval notation.

$$-4 < \frac{4z + 1}{5} < 1$$

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

- ○ **A.** The solution set in interval notation is _____ .
  (Use integers or fractions for any numbers in the expression.)
- ○ **B.** The solution is all real numbers.
- ○ **C.** There is no solution.

Answer: A. The solution set in interval notation is $\left(\dfrac{-21}{4}, 1 \right)$.
(Use integers or fractions for any numbers in the expression.)

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9. Solve the equation.

$|5x| = 10$

The solution(s) are x = _____ .
(Use a comma to separate answers as needed.)

Answer: $-2, 2$

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10. Solve the absolute value equation.

$$|x| = -1$$

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

○ **A.** x = _____
   (Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed.)
○ **B.** There is no solution.

   Answer: B. There is no solution.

11. Solve the absolute value equation.

$$|-2x + 2| + 2 = 10$$

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

○ **A.** x = _____   (Type an integer or a fraction. Use a comma to separate answers as needed.)
○ **B.** There are no solutions.

   Answer: A. x = ___−3,5___   (Type an integer or a fraction. Use a comma to separate answers as needed.)

12. Solve the absolute value inequality. Write the answer in interval notation.

$$|x| > 9$$

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

○ **A.** The solution is _____ .
   (Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)
○ **B.** There is no solution.

   Answer: A. The solution is __(−∞, −9)∪(9, ∞)__ .
           (Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)

13. Solve the absolute value inequality. Write the solution in interval notation.

$|-10x + 10| < 20$

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

○ **A.** The solution set is _____ .
(Type the solution set using interval notation. Use integers or fractions for any numbers in the expression.)

○ **B.** There is no solution.

Answer: A. The solution set is __(− 1,3)__ .
(Type the solution set using interval notation. Use integers or fractions for any numbers in the expression.)

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14. Solve the absolute value inequality. Write the solution in interval notation.

$5|x + 6| \geq 25$

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

○ **A.** The solution set is _____ .
(Type the solution set using interval notation. Use integers or fractions for any numbers in the expression. Simplify your answer.)

○ **B.** There is no solution.

Answer: A. The solution set is **$(-\infty, -11] \cup [-1, \infty)$** .
(Type the solution set using interval notation. Use integers or fractions for any numbers in the expression. Simplify your answer.)

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15. Solve the inequality.

$|3 - 2x| - 5 < -4$

What is the solution set?

_____

(Type your answer in interval notation. Type integers or improper fractions. Simplify your answer)

Answer: (1,2)

16. Solve the absolute value inequality. Write the solution in interval notation.

$$|x + 5| > -3$$

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

○ **A.** The solution is _____.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression.)

○ **B.** There is no solution.

Answer: A. The solution is ___**(− ∞, ∞)**___.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression.)

17. Solve the absolute value inequality. Write the answer in interval notation.

$$|2z - 1| + 4 \le 3$$

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

○ **A.** The solution is _____.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression.)

○ **B.** There is no solution.

Answer: B. There is no solution.

18. Solve the inequality. Give the solution set using interval notation.

$$|3y - 3| > -4$$

Choose the solution set.

○ **A.** $\left(-\infty, -\dfrac{1}{3}\right)$

○ **B.** $\left(-\dfrac{1}{3}, \infty\right)$

○ **C.** $(-\infty, \infty)$

○ **D.** $\varnothing$

Answer: C. $(-\infty, \infty)$