Student: _____ **Instructor:** Ray Brown **Assignment:** ch03rev HW
Date: _____ **Course:** M050 Sum17 CAI 10052 G43

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 3 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/hdgCN7IxsCg7

   Answer: True - I understand the concept.

2. Which of the following are examples of like terms being combined correctly?

   Select all that apply.

   ☐ **A.** $3x + 5x = 8x$
   ☐ **B.** $-x + 2y = -2xy$
   ☐ **C.** $9y - 13y = -4$
   ☐ **D.** $-5x + -5y = 0$
   ☐ **E.** $3a + 5a - 4a = 4a$

   Answer: A. $3x + 5x = 8x$, E. $3a + 5a - 4a = 4a$

3. Simplify the following expression.

   $14x + 5 - 4x + 9$

   $14x + 5 - 4x + 9 =$ _____

   Answer: $10x + 14$

4. Simplify the following sum.

   $(x + 9) + (3x + 2)$

   $(x + 9) + (3x + 2) =$ _____

   Answer: $4x + 11$

5. Simplify the following sum.

$(4a + 3) + (7a - 3)$

$(4a + 3) + (7a - 3) =$ _____

Answer: $11a$

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6. Simplify the following difference.

$(18m + 6) - (6m - 8)$

$(18m + 6) - (6m - 8) =$ _____

Answer: $12m + 14$

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7. Simplify the following difference.

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

$(-x + 7) - (-3x + 9) =$ _____

Answer: $2x - 2$

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8. Simplify the following product.

$-3(4x - 5)$

$-3(4x - 5) =$ _____

Answer: $-12x + 15$

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9. Simplify the following expression.

$5(2a + 3) - 6$

$5(2a + 3) - 6 =$ _____

Answer: $10a + 9$

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10. Simplify the following expression.

$6(b + 4) - 3b$

$6(b + 4) - 3b =$ _____

Answer: $3b + 24$

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11. Simplify the following expression.

$-(6a+6)-4(a-9)$

$-(6a+6)-4(a-9) =$ _____ (Simplify your answer.)

Answer: $-10a+30$

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12. Translate the following sentence to an equation using x as the variable. Do not solve the equation.

Three less than a number is 12.

The equation is _____.
(Do not simplify.)

Answer: $x-3=12$

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13. Translate the sentence into an equation.

The product of 3 and the sum of a number and 7 is 33.

The equation is _____.
(Type an equation using x as the variable.)

Answer: $3(x+7)=33$

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14. Fill in the blank.

Two equations with exactly the same solution(s) are called _____ equations.

Two equations with exactly the same solution(s) are called (1) _____ equations.

(1) ○ equivalent
○ non-equivalent

Answer: (1) equivalent

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15. Determine if the given value is a solution to the given equation.

10, $4(x+2)=4x-4$

Is 10 a solution to the equation $4(x+2)=4x-4$?

○ No
○ Yes

Answer: No

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16. Determine if the equations in the given pair are equivalent. Each equation has only one solution.

$3x + 1 = 7$ and $x = 2$

Choose the correct answer below.

- ○ Not equivalent
- ○ Equivalent

Answer: Equivalent

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17. Use the addition property of equality to solve the following equation. Check your solution.

$-34 = x - 12$

$x =$ _____ (Simplify your answer.)

Answer: -22

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18. Use the addition property of equality to solve the following equation. Check your solution.

$7y + 9 = 8y$

$y =$ _____ (Simplify your answer.)

Answer: 9

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19. Use the multiplication property of equality to solve the following equation. Check your solution.

$-9x = -45$

$x =$ _____ (Simplify your answer.)

Answer: 5

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20. Use the multiplication property of equality to solve the following equation. Check your solution.

$\frac{x}{2} = 9$

$x =$ _____ (Simplify your answer.)

Answer: 18

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21. Solve the following equation.

$x - 7 = -14$

$x =$ _____ (Simplify your answer.)

Answer: -7

22. Solve the following equation.

$\frac{x}{4} = -13$

x = _____ (Simplify your answer.)

Answer: -52

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23. Solve the following equation.

$46 = -14 + r$

r = _____ (Simplify your answer.)

Answer: 60

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24. Solve the linear equation algebraically.

$7b - 4b = 36$

The solution to the equation is _____.
(Simplify your answer.)

Answer: 12

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25. Solve the following linear equation algebraically.

$5n + 15 = 60$

The solution is n = _____
(Simplify your answer.)

Answer: 9

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26. Solve the equation.

$6(5x - 2) = 31x$

x = _____

Answer: -12

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27. Solve the following equation.

$-3n + 14 = -2n - 16$

n = _____

Answer: 30

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28. Solve the linear equation algebraically.

$$\frac{k}{5} = -14 + 16$$

The solution to the equation is _____.
(Simplify your answer.)

Answer: 10

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29. Solve the linear equation algebraically.

$$3x + 2x = 10x + 15$$

The solution to the equation is _____.
(Simplify your answer.)

Answer: -3

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30. Complete the following table of values and then solve the linear equation $4(x-2) = -16$ numerically.

x	−2	−1	0	1	2
4(x − 2)					

Complete the table.

x	−2	−1	0	1	2
4(x − 2)					

(Simplify your answers.)

The solution is _____.
(Simplify your answer.)

Answers -16
-12
-8
-4
0
-2

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31. Solve the number problem by finding the value of the unknown number.

A number decreased by 3 gives twice the number.

The unknown number is _____.

Answer: -3

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32. Solve the number problem by finding the value of the unknown number.

When the sum of a number and -2 is multiplied by -7, the result is 42.

The unknown number is _____.

Answer: -4

33. Solve the number problem by finding the value of the unknown number.

Subtracting 6 from the product of 4 and a number results in the number added to 24.

The unknown number is _____.

Answer: 10