Math 1314 College Algebra – Homework 2

Section 2.3 – Quadratic Equations TASKS
Section 6.1 – Solving a System of Linear Equations TASK
Section 6.2 – Solving Other Systems TASK

Work the following problems and choose the correct answer. The problems that refer to the Textbook may be found at www.casa.uh.edu in the Online Textbook under the Exercises link in the appropriate section. Record your answers by logging into your CASA account, go to the EMCF link in the top menu bar, selecting the appropriate assignment in the EMCF menu and recording your choices on the EMCF form. You MUST record your answers by the deadline given. No late homework will be accepted.

1. Textbook Section 2.3 Exercise #4
   A. 0, -8
   B. -10, 2
   C. -2, 10
   D. 4, -5
   E. None of the above

2. Textbook Section 2.3 Exercise #26
   Which of the following is equivalent to the equation in exercise 26, while you apply completing the square method?
   A. $(x-3)^2 = 31$
   B. $(x-3)^2 = 49$
   C. $(x-3)^2 = 40$
   D. $(x-6)^2 = 49$
   E. None of the above

3. Textbook Section 2.3 Exercise #26 - The solutions are:
   A. -10, 4
   B. 4, 7, 10
   C. 10, -4
   D. 7, -7
   E. None of the above

4. Textbook Section 2.3 Exercise #30
   Which of the following equations is equivalent to the equation in exercise 30, while you apply completing the square method?
   A. $(x+6)^2 = 8$
   B. $(x-12)^2 = -28$
   C. $(x-6)^2 = 28$
   D. $(x+6)^2 = -28$
   E. None of the above

5. Textbook Section 2.3 Exercise #30 – The solutions are:
   A. $-6+2\sqrt{2}, -6-2\sqrt{2}$
   B. $6+2\sqrt{2}, 6-2\sqrt{2}$
   C. $6+\sqrt{2}, 6-\sqrt{2}$
   D. 2, -4
   E. None of the above

6. Textbook Section 2.3 Exercise #70 - The bigger number is:
   A. 20
   B. 24
   C. 25
   D. 30
   E. None of the above

7. Textbook Section 6.1 Exercise #2
   A. The two lines are parallel
   B. The two equations represent the same line
   C. The lines intersect at the point (3, 1)
   D. The lines intersect at the point (0, 7)
   E. None of the above

8. Textbook Section 6.1 Exercise #6
   A. The two lines are parallel
   B. The two equations represent the same line
   C. The lines intersect at the point (0, 4)
   D. The lines intersect at the point (-2,-2)
   E. None of the above

9. Tom is walking his dog in the park. He notices that there are tricycles and bicycles parked on the bike rack at the park. There are a total of 23 vehicles with a total of 52 wheels. Using the variables "b" for bicycles and "t" for tricycles, write the system of equations that represents the number of vehicles and the number of wheels.

    A. $\begin{aligned} b+t &= 52 \\ 2b+3t &= 23 \end{aligned}$

    B. $\begin{aligned} b+t &= 23 \\ 2b+3t &= 52 \end{aligned}$

    C. $\begin{aligned} b+t &= 23 \\ b+t &= 52 \end{aligned}$

    D. $\begin{aligned} b &= 23 \\ t &= 52 \end{aligned}$

    E. None of the above

10. Textbook Section 6.1 Exercise #18
    Find the x-coordinate of the intersection point.
    A. 3
    B. $\dfrac{31}{13}$
    C. −3
    D. −5
    E. 5
    F. There is no intersection point, the lines are parallel.

11. Textbook Section 6.1 Exercise #20
    Find the y-coordinate of the point of intersection.
    A. 12
    B. 0
    C. $\dfrac{-13}{10}$
    D. 3
    E. There is no intersection point, the lines are parallel.

12. Textbook Section 6.1 Exercise #26 – The point of intersection is:
    A. (-1, -9)
    B. (9, 1)
    C. (-9, -1)
    D. (1, 9)
    E. (2, 11)
    F. The lines are parallel.

13. Textbook Section 6.2 Exercise #8
    Find the x-coordinate(s) of the point of intersection(s).
    A. 1, -2
    B. 2, -1
    C. 4, 1
    D. -4, -1
    E. 4, -1
    F. None of the above

14. Textbook Section 6.4 Exercise #24 – Find the number of dimes.
    A. 28
    B. 35
    C. 70
    D. 77
    E. 100
    F. None of the above

15. Find the x-coordinate of the point of intersection(s) for the following system
    $x^2 + y^2 = 34$
    $x - 4y = 0$.

    A. 2, -2
    B. $\sqrt{2}, -\sqrt{2}$
    C. 8, -8
    D. $4\sqrt{2}, -4\sqrt{2}$
    E. None of the above