A.A.10: Solve systems of two linear equations in two variables algebraically.

1. 080429a, P.I. A.A.10
What point is the intersection of the graphs of the lines $2x - y = 3$ and $x + y = 3$?

[A] (2, 1) [B] (3, 3)

[C] (3, 0) [D] (1, 2)

2. 060716a, P.I. A.A.10
Which ordered pair satisfies the system of equations below?

$$3x - y = 8$$
$$x + y = 2$$

[A] (3, -1) [B] (2.5, 0.5)

[C] (2.5, -0.5) [D] (5, -3)

3. 060824a, P.I. A.A.10
If $x + y = -10$ and $x - y = 2$, what is the value of x?

[A] -4 [B] 4 [C] -6 [D] 6

4. 060007a, P.I. A.A.10
Which ordered pair is the solution of the following system of equations?

$$3x + 2y = 4$$
$$-2x + 2y = 24$$

[A] (2,-5) [B] (-4,-8)

[C] (-4,8) [D] (2,-1)

5. 060925ia, P.I. A.A.10
What is the value of the y-coordinate of the solution to the system of equations $x + 2y = 9$ and $x - y = 3$?

[A] 3 [B] 2 [C] 6 [D] 5

6. 080920ia, P.I. A.A.10
What is the value of the y-coordinate of the solution to the system of equations $x - 2y = 1$ and $x + 4y = 7$?

[A] -1 [B] 4 [C] 1 [D] 3

7. 080013a, P.I. A.A.10
What is the value of y in the following system of equations?

$$2x + 3y = 6$$
$$2x + y = -2$$

[A] 2 [B] 4 [C] -3 [D] 1

8. 080706a, P.I. A.A.10
If $a + 3b = 13$ and $a + b = 5$, the value of b is

[A] 4.5 [B] 1 [C] 4 [D] 7

9. 010937ia, P.I. A.A.10
Solve the following system of equations algebraically:

$$3x + 2y = 4$$
$$4x + 3y = 7$$

[Only an algebraic solution can receive full credit.]

10. 080529a, P.I. A.A.10
When solved graphically, which system of equations will have exactly one point of intersection?

[A] $y = 0.5x + 30$
$y = 0.5x - 30$

[B] $y = -x + 15$
$y = -x + 25$

[C] $y = -x - 20$
$y = x + 17$

[D] $y = \frac{3}{5}x + 12$
$y = 0.6x - 19$

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[1] A

[2] C

[3] A

[4] C

[5] B

[6] C

[7] B

[8] C

[4] (-2,5) or $x = -2$. and $y = 5$, and appropriate algebraic work is shown.
[3] Appropriate algebraic work is shown, but one computational error is made, but appropriate values are found for x and y.
or [3] $x = -2$ or $y = 5$, and appropriate algebraic work is shown.
[2] Appropriate algebraic work is shown, but two or more computational errors are made, but appropriate values are found for x and y.
or [2] Appropriate algebraic work is shown, but one conceptual error is made.
or [2] (-2,5) or $x = -2$ and $y = 5$, but a method other than an algebraic method is used.
[1] Appropriate algebraic work is shown, but one conceptual error and one computational error are made.
or [1] The trial-and-error method is used to find the correct solution, but fewer than three trials and appropriate checks are shown.
or [1] $x = -2$ or $y = 5$, but a method other than an algebraic method is used.
or [1] (-2,5) or $x = -2$ and $y = 5$, but no work is shown.
[0] $x = -2$ or $y = 5$, but no work is shown.
or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[9] obviously incorrect procedure.

[10] C