A1 SOL Packet #5

Look at the system of equations.

$$\begin{cases} y = {}^-x + 2 \\ 7x + 4y = {}^-1 \end{cases}$$

What is the value of x for the solution to this system of equations?

A $^-5$

B $^-3$

C 3

D 5

2013

Directions: Click on a box to choose each point you want to select. You must select all correct points.
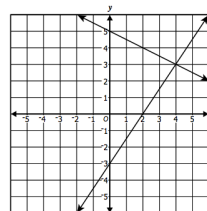
A system of inequalities is shown.

$$\begin{cases} y > \dfrac{1}{2}x + 1 \\ y + 3x \le 6 \end{cases}$$

From the given points, select each point that is a solution to this system of inequalities.

| $(^-1, ^-3)$ | $(1, 2)$ | $(2, 0)$ | $(4, 6)$ |

2013

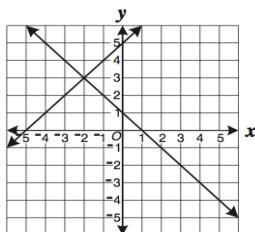**This is the graph of a system of linear equations.**

Based upon the graph, which is the apparent solution to the system of equations?

A $(2, 5)$

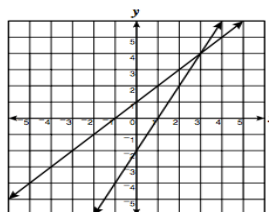B $(3, 4)$

C $(4, 3)$

D $(5, 2)$

2010

This is a graph of a system of equations.

Which is most likely the solution to the system of equations shown?

F $(0, 5)$

G $(1, 0)$

H $(3, ^-2)$

J $(^-2, 3)$

2003

Which is most likely the solution to the system of equations shown in the graph?

F $(4, 3)$

G $(^-2, 0)$

H $(3, 4)$

J $(1, 0)$

2002

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$$\begin{cases} y = 4x + 2 \\ y = x - 1 \end{cases}$$

What is the solution to the system of equations?

A $x = ^-1, y = 2$

B $x = ^-1, y = ^-2$

C $x = 1, y = ^-2$

D $x = 1, y = 2$

$$\begin{cases} 3x + y = 11 \\ y = x + 3 \end{cases}$$

Which is the solution to the system of equations shown?

F (4, 7)

G (2, 17)

H (2, 5)

J $\left(\dfrac{1}{2}, 3\dfrac{1}{2} \right)$

Which ordered pair represents the solution to the system of equations?

$$\begin{cases} 2x - 7y = 0 \\ x - 6y = ^-5 \end{cases}$$

F (7, 2)

G (2, 7)

H (1, 1)

J (-11, -1)

What is the solution of the system of equations shown?

$$\begin{cases} 2x + 5y = 8 \\ 6x + 4y = ^-20 \end{cases}$$

A (-6, 4)

B (6, -14)

C (14, -4)

D (-6, -4)

What is the solution to the system of linear equations below?

$$\begin{cases} x + y = 5 \\ x - y = 3 \end{cases}$$

A (8, -3)

B (6, -1)

C (5, 2)

D (4, 1)

$$\begin{cases} 4x - 3y = 10 \\ x + 4y = ^-7 \end{cases}$$

What is the solution to the system of equations shown above?

A (1, -2)

B (-11, 1)

C $\left(-2, \dfrac{^-5}{4} \right)$

D (-15, 2)

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What is the solution to the following system of equations?

$$\begin{cases} x+2y=5 \\ 3x+2y=7 \end{cases}$$

A $x=3, y=4$

B $x=1, y=3$

C $x=1, y=2$

D $x=3, y=1$

What is the solution to the following system of linear equations?

$$\begin{cases} 4x-y=^-6 \\ x-2y=^-5 \end{cases}$$

F $\left(^-1, 2\right)$

G $\left(0, 6\right)$

H $\left(1, 2\right)$

J $\left(2, ^-1\right)$

$$\begin{cases} x-y=7 \\ 2x+y=^-1 \end{cases}$$

Which is the solution to the system of equations shown?

A $x=^-5, y=2$

B $x=^-2, y=5$

C $x=^-1, y=^-7$

D $x=2, y=^-5$

$$\begin{cases} ^-4x+5y=27 \\ x-6y=^-2 \end{cases}$$

What is the solution to the system of equations shown above?

A $(^-8, ^-1)$

B $\left(0, \frac{1}{3}\right)$

C $\left(^-1, \frac{1}{6}\right)$

D $(5, ^-6)$

$$\begin{cases} x-y=5 \\ x+y=7 \end{cases}$$

What is the solution to the system of equations shown above?

A $x=6, y=1$

B $x=4, y=3$

C $x=1, y=6$

D $x=^-1, y=7$

$$\begin{cases} x+y=4 \\ x-y=2 \end{cases}$$

Which is the solution to the system of equations shown?

F $x=1, y=3$

G $x=2, y=2$

H $x=3, y=1$

J $x=4, y=0$

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What is the solution to this system of equations?

$$\begin{cases} 5x + 4y = 22 \\ 3x + 4y = 10 \end{cases}$$

F $x = 2, y = 2$

G $x = 2, y = 3$

H $x = 2, y = 1$

J $x = 6, y = {}^-2$

$$\begin{cases} 2x + y = 4 \\ 3x - y = {}^-14 \end{cases}$$

Which is the solution to the system of equations shown?

F $({}^-2, 8)$

G $({}^-2, 0)$

H $(2, 0)$

J $(0, {}^-2)$

$$\begin{cases} 2x - 6 = 2y \\ 3 - 2x = y \end{cases}$$

What is the solution to this system of equations?

A $x = {}^-2, y = {}^-3$

B $x = 0, y = {}^-3$

C $x = 1, y = {}^-2$

D $x = 2, y = {}^-1$

Andrea has 37 coins, all nickels and dimes. The value of the 37 coins is $3.10. How many dimes does Andrea have?

A 12

B 19

C 25

D 31

Ralph spent $132 to buy movie tickets for 20 students and 4 adult chaperones. Adult tickets cost $3 more than student tickets. If A is the price of an adult ticket and S is the price of a student ticket, which system of equations could be used to find the price of each adult and student ticket?

F $\begin{cases} S = A + 3 \\ 4A + 20S = 132 \end{cases}$

G $\begin{cases} A = S + 3 \\ 4A + 20S = 132 \end{cases}$

H $\begin{cases} A + S = 3 \\ 20A + 4S = 132 \end{cases}$

J $\begin{cases} A = S + 3 \\ A + S = 132 \end{cases}$

The difference in cost between a large bag of chips and a small bag of chips was 90¢. Alicia bought 5 large bags and 3 small bags of chips for her party and spent $17.22. What was the cost of a small bag of chips?

F $5.74

G $2.49

H $2.15

J $1.59

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Mrs. Crews bought 4 pencils and 3 pens for $5.60. Miss Houston bought 2 pencils and 3 pens of the same kind for $4.60. What was the price of each pencil and each pen?

A $1.70 per pencil, $0.20 per pen

B $0.50 per pencil, $1.20 per pen

C $0.17 per pencil, $1.64 per pen

D $0.80 per pencil, $0.80 per pen

2005

The Arcadia Theater charges $4 for adult tickets and $3 for student tickets. Mr. Steele purchased 9 tickets (some student and some adult) for $31. Which system of equations could be used to find a, the number of adult tickets, and s, the number of student tickets Mr. Steele purchased?

F $\begin{cases} a + s = 31 \\ 4a + 3s = 9 \end{cases}$

G $\begin{cases} 4a + 3s = 31 \\ a + s = 9 \end{cases}$

H $\begin{cases} 3a + 4s = 31 \\ a + s = 9 \end{cases}$

J $\begin{cases} 3a + 4s = 9 \\ a + s = 31 \end{cases}$

2004

Karen makes $5 per hour baby-sitting and $12 per hour giving music lessons. One weekend, she worked a total of 18 hours and made $139. How many hours did she spend baby-sitting?

F 11

G 9

H 7

J 6

2004

Tommie paid $17.50 to buy 6 youth tickets and 1 adult ticket to a school carnival. Susan paid $22.50 to buy 3 youth tickets and 3 adult tickets at the carnival. What was the price of an adult ticket?

F $2.00

G $2.90

H $5.50

J $7.50

2010

One competitor in a 100-mile bicycle race took a total of 5 hours to complete the course. His average speed in the morning was 23 miles per hour. His average speed in the afternoon was 13 miles per hour. How many hours did he ride in the morning, and how many hours did he ride in the afternoon?

F Morning - 2.5 hours, afternoon - 2.5 hours

G Morning - 3 hours, afternoon - 2 hours

H Morning - 3.5 hours, afternoon - 1.5 hours

J Morning - 4 hours, afternoon - 1 hour

2000

Directions: Click and drag the two selected inequalities to the box.

Using the inequalities shown, create a system of two inequalities that could be represented by this graph.
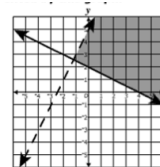
$y > \frac{-1}{2}x + 2$	$2x + 5 > y$
$y < \frac{-1}{2}x + 2$	$2x + 5 < y$
$y \geq \frac{-1}{2}x + 2$	$2x + 5 \geq y$
$y \leq \frac{-1}{2}x + 2$	$2x + 5 \leq y$

PIG 2009

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Zac began graphing the system of inequalities shown:

$$\begin{cases} y \geq \dfrac{2}{3}x + 1 \\ 5x + 6y \leq {}^{-}30 \end{cases}$$

To complete the graph, Zac must shade the region which represents the solution set to the system of inequalities. What region of the graph needs to be shaded?

PIG 2009