Bellwork Alg 2A Wednesday, November 16, 2016

Solve each system of equations using either Elimination or Substitution. You must use each method TWICE. Your work must match the method you've stated. State answers as ordered pairs.

1. Which Method?_____

$3x + 2y = -3.25$

$8x - 6y = 31$

2. Which Method?_____

$4a + b = 50$

$5a + 7b = 97$

3. Which Method?_____

$7g + 3h = -50$

$6g - 2h = -20$

4. Which Method?_____

$18x - 6y = 48$

$14x - 4y = 34$

Bellwork Alg 2A Wednesday, November 16, 2016 Answers

Solve each system of equations using either Elimination or Substitution. You must use each method TWICE. Your work must match the method you've stated. State answers as ordered pairs.

1. Which Method? Elimination

$3(3x + 2y = -3.25) \rightarrow 9x + 6y = -9.75$

$8x - 6y = 31 \rightarrow +\ 8x - 6y = 31$

$\frac{17x}{17} = \frac{21.25}{17}$

$x = 1.25$

$3(1.25) + 2y = -3.25$

$3.75 + 2y = -3.25$

$\frac{2y}{2} = \frac{-7}{2}$

$y = -3.5$

$(1.25, -3.5)$

2. Which Method? Substitution

$4a + b = 50 \rightarrow b = 50 - 4a$

$5a + 7b = 97$

$5a + 7(50 - 4a) = 97$

$5a + 350 - 28a = 97$

$-23a + 350 = 97$

$\frac{-23a}{-23} = \frac{-253}{-23}$

$a = 11$

$b = 50 - 4(11)$

$50 - 44$

$b = 6$

$(11, 6)$

3. Which Method? Substitution

$7g + 3h = -50$

$6g - 2h = -20 \rightarrow 6g - 2h = -20$

$-6g \quad -6g$

$-2h = -20 - 6g$

$\frac{-2h}{-2} = \frac{-20 - 6g}{-2}$

$h = 10 + 3g$

$7g + 3(10 + 3g) = -50$

$7g + 30 + 9g = -50$

$16g + 30 = -50$

$\frac{16g}{16} = \frac{-80}{16}$

$g = -5$

$h = 10 + 3(-5)$

$h = 10 - 15$

$h = -5$

$(-5, -5)$

4. Which Method? Elimination

$2(18x - 6y = 48) \rightarrow 36x - 12y = 96$

$3(14x - 4y = 34) \rightarrow -\ 42x - 12y = 102$

$-6x = -6$

$x = 1$

$14(1) - 4y = 34$

$14 - 4y = 34$

$\frac{-4y}{-4} = \frac{20}{-4}$

$y = -5$

$(1, -5)$