

Algebra 1 Bellwork Tuesday, January 13, 2015

Solve each system of equations. Give your answer as an ordered pair.

1.

$$4x - 3y = -15$$

$$y = 5x - 6$$

2.

$$4a - 6b = -74$$

$$-7a + 15b = 179$$

3.

$$4.3g + 1.8h = 28.3$$

$$2.9g - 5.4h = 25.7$$

4. David and his brother went to the store to buy some hats and t-shirts. David bought 3 hats and 4 t-shirts and spent \$114. His brother bought 4 hats and 5 t-shirts and spent \$147. Write and solve a system of equations to find the cost of a hat and the cost of a t-shirt.

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Solve each system of equations. Give your answer as an ordered pair.

1.

$$4x - 3y = -15$$

$$y = 5x - 6$$

(3, 9)

2.

$$5(4a - 6b = -74)$$

$$2(-7a + 15b = 179)$$

$$20a - 30b = -370$$

$$+ -14a + 30b = 358$$

$$6a = -12$$

$$a = -2 \rightarrow -7(-2) + 15b = 17$$

$$14 + 15b = 179$$

$$-14 \quad -14$$

$$15b = 165$$

$$b = 11$$

(-2, 11)

3.

$$10(4.3g + 1.8h = 28.3) \rightarrow 3(43g + 18h = 283)$$

$$10(2.9g - 5.4h = 25.7) \rightarrow 29g - 54h = 257 + 29g - 54h = 257$$

$$129g + 54h = 849$$

$$158g = 1106$$

$$g = 7 \rightarrow 4.3(7) + 1.8h = 28.3$$

$$30.1 + 1.8h = 28.3 \quad 1.8h =$$

(7, -1)

4. David and his brother went to the store to buy some hats and t-shirts. David bought 3 hats and 4 t-shirts and spent \$114. His brother bought 4 hats and 5 t-shirts and spent \$147. Write and solve a system of equations to find the cost of a hat and the cost of a t-shirt.

H = # hats

T = # t-shirts

$$4(3H + 4T = 114)$$

$$3(4H + 5T = 147)$$

$$12H + 16T = 456$$

$$-12H + 15T = 441$$

$$T = \$15 \rightarrow$$

$$3H + 4(15) = 114 \rightarrow 3H = 114 - 60 = 54 \rightarrow H = 18$$

Hats → \$18 each
T-shirts → \$15 each