

Math 3 - Unit 1 Day 2 Homework

Answer Key

You must show the equations for the system, label your variables and solve the system in order to receive full credit for this HW assignment.

1. The math club and the science club had fundraisers to buy supplies for a hospice. The math club spent \$135 buying six cases of juice and one case of bottled water. The science club spent \$110 buying four cases of juice and two cases of bottled water. How much did a case of juice cost? How much did a case of bottled water cost?

$$6j + 1w = 135$$

$$4j + 2w = 110$$

juice = \$20 per case
water = \$15 per case

2. Suppose you invest \$1500 in equipment to put pictures on T-shirts. You buy each T-shirt for \$3. After you have placed the picture on a shirt, you sell it for \$20. How many T-shirts must you sell to break even?

$$20t = 1500 + 3t$$

$$17t = 1500$$

$$t = 88.24 \text{ t-shirts, so } \rightarrow \boxed{89 \text{ t-shirts}}$$

3. Suppose you bought supplies for a party. Three rolls of streamers and 15 party hats cost \$30. Later, you bought 2 rolls of streamers and 4 party hats for \$11. How much did each roll of streamers cost? How much did each party hat cost?

$$3s + 15h = 30$$

$$2s + 4h = 11$$

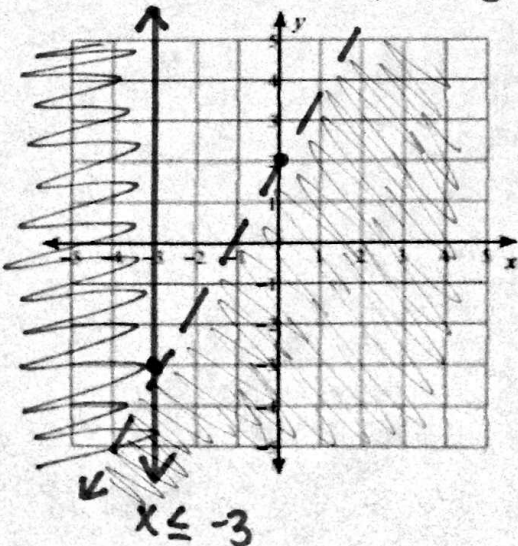
streamers : \$2.50
hats : \$1.50

Graph the following Systems of Inequalities:

4) $x \leq -3$

$$y < \frac{5}{3}x + 2$$

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8) $3x + 2y \geq -2$
 $x + 2y \leq 2$

x-int: $-\frac{2}{3}$
y-int: -1

x-int: 2
y-int: 1

