Algebra 2 Bellwork Fri., Oct. 16, 2015

For 1 to 3, solve each system of equations using either Substitution or Elimination. You can't use the same method on all three. Give your answer as an ordered pair.

1. $3c - 7d = -31$
   $4c - 7d = -39$

2. $5J - 8K = 68$
   $3J - 7K = 54$

3. $5V - 3W = -12$
   $8V + 4W = 60$

4. Each jar holds 16 ounces and each can holds 12 ounces. There are a total of 20 containers that hold a total of 268 ounces. Write and solve a system of equations to find the number of jars and cans that were used.

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ANSWERS

For 1 to 3, solve each system of equations using either Substitution or Elimination. You can't use the same method on all three. Give your answer as an ordered pair.

1. ELIMINATION

$3c - 7d = -31$
$-\ 4c - 7d = -39$

$-c = 8$

$c = -8$

$3(-8) - 7d = -31$

$-24 - 7d = -31$

$+24 \quad +24$

$-7d = -7$

$d = +1$

$(-8, +1)$

2. ELIMINATION

$3(5J - 8K = 68)$
$5(3J - 7K = 54)$

$15J - 24K = 204$
$-\ 15J - 35K = 270$

$11K = -66$

$K = -6$

$3J - 7(-6) = 54$

$3J + 42 = 54 \rightarrow 3J = 12$

$J = 4$

$(4, -6)$

3. SUBSTITUTION

$5V - 3W = -12$
$8V + 4W = 60$

$4W = 60 - 8V$

$W = 15 - 2V$

$W = 15 - 2(3)$

$W = 9$

$5V - 3(15 - 2V) = -12$

$5V - 45 + 6V = -12$

$11V - 45 = -12$

$+45 \quad +45$

$11V = 33 \rightarrow V = 3$

$(3, 9)$

4. Each jar holds 16 ounces and each can holds 12 ounces. There are a total of 20 containers that hold a total of 268 ounces. Write and solve a system of equations to find the number of jars and cans that were used.

j = # jars

c = # cans

$16j + 12c = 268$

$12(j + c = 20) \rightarrow$

$16j + 12c = 268$

$-\ 12j + 12c = 240$

$4j = 28$

$j = 7$

7 jars & 13 cans