Algebra 1   Bellwork   Friday, January 30, 2015

1. After experimenting you've found tha the "perfect" mixture for a drink is 23% Grape. All that is available is a drink that is 15% Grape and another that is 31% Grape. How many quarts of each of these should you mix together to end up with 30 quarts of the "perfect" 23% mixture?

Qts of 15% Grape drink =

Qts of 31% Grape drink =

2. Sally's favorite color is pink. Her favorite shade of pink is then the paint is 33% red. She wants to mix up 5 gallons of her favorite pink but all that is available is paint that is 17% red and another that is 37% red. How many gallons of each of these paints should be mixed to get what she wants?

Gal of 17% red paint =

Gal of 37% red paint =

X   Qts of 15% Grape drink =   15 QTS

Y   Qts of 31% Grape drink =   15 QTS

$$.15x + .31y = .23(30) = 6.9$$
$$.15(x + y = 30)$$
$$.15x + .15y = 4.5$$
$$- \ .15x + .31y = 6.9$$
$$\overline{}$$
$$-.16y = -2.4$$
$$y = 15$$

X → Gal of 17% red paint =   1

Y → Gal of 37% red paint =   4

$$.17x + .37y = .33(5)$$
$$.17x + .37y = 1.65$$
$$.17(x + y = 5)$$
$$.17x + .37y = 1.65$$
$$- \ .17x + .17y = .85$$
$$\overline{}$$
$$.20y = .80 \qquad y = 4$$