e each system of equations. Please remember to define your variables.

1.) Phoebe has some 32-cent stamps, some 29-cent stamps, and some 3-cent stamps. The number of 29-cent stamps is 10 less than the number of 32-cent stamps, while the number of 3-cent stamps is 5 less than the number of 29-cent stamps. The total value of the stamps is $9.45. How many of each stamp does she have?

x = 32-CENT STAMPS

y = 29-CENT STAMPS

z = 3-CENT STAMPS

$y = x - 10$

$z = y - 5$

$.32x + .29y + .03z = 9.45$

$.32x + .29(x-10) + .03(x-15) = 9.45$

$.32x + .29x - 2.9 + .03x - 0.45 = 9.45$

$.64x - 3.35 = 9.45$

$.64x = 12.80$

$x = 20$

$z = x - 10 - 5$

$z = x - 15$

$y = 20 - 10$

$y = 10$

$z = 10 - 5$

$z = 5$

20	32-CENT STAMPS
10	29-CENT STAMPS
5	3-CENT STAMPS

2.) Billy's Restaurant ordered 200 flowers for Mother's Day. They ordered carnations at $1.50 each, roses at $3.75 each, and daisies at $2.60 each. They ordered mostly carnations, and 20 fewer roses than daisies. The total order came to $589.50. How many of each type of flower was ordered?

SKIP

3.) The Arcadium arcade in Lynchburg, Tennessee uses three different colored tokens for their game machines. For \$20 you can purchase any of the following mixtures of tokens: 14 gold, 20 silver, and 24 bronze; OR, 20 gold, 15 silver, and 19 bronze; OR, 30 gold, 5 silver, and 13 bronze. What is the monetary value of each token?

$x = \$ \text{ GOLD}$

$y = \$ \text{ SILVER}$

$z = \$ \text{ BRONZE}$

$$\text{Ⓐ } 14x + 20y + 24z = 20$$
$$\text{Ⓑ } 20x + 15y + 19z = 20$$
$$\text{Ⓒ } 30x + 5y + 13z = 20$$

GOLD	$= \$0.50$
SILVER	$= \$0.35$
BRONZE	$= \$0.25$

(3) A & B(-4)

$42x + 60y + 72z = 60$
$-80x - 60y - 76z = -80$
_____
$-38x - 4z = -20$

B & C(-3)

$20x + 15y + 19z = 20$
$-90x - 15y - 39z = -60$
_____
$-70x - 20z = -40$

$-5(-38x - 4z = -20) \rightarrow 190x + 20z = 100$
$-70x - 20z = -40 \rightarrow -70x - 20z = -40$
_____
$120x = 60$

$x = .50$

$-70(.50) - 20z = -40$
$-35 - 20z = -40$
$-20z = -5$
$z = .25$

$14(.50) + 20y + 24(.25) = 20$
$7 + 20y + 6 = 20$
$20y + 13 = 20$
$20y = 7$ → $y = 0.35$

4.) Last Tuesday, Regal Cinemas sold a total of 8500 movie tickets. Proceeds totaled \$64,600. Tickets can be bought in one of three ways: a matinee admission costs \$5, student admission is \$6 all day, and regular admission is \$8.50. How many of each type of ticket was sold if twice as many student tickets were sold as matinee tickets?

$x = \text{MATINEE ADMISSION}$

$y = \text{STUDENT ADMISSION}$

$z = \text{REGULAR ADMISSION}$

$$x + y + z = 8500$$
$$5x + 6y + 8.50z = 64,600$$
$$y = 2x$$

900	MATINEE ADMIN.
1800	STUDENT ADMIN.
5800	REGULAR ADMIN.

$x + 2x + z = 8500$
$3x + z = 8500$

$5x + 6(2x) + 8.50z = 64,600$
$17x + 8.50z = 64,600$

$3x + z = 8500 \rightarrow z = -3x + 8500$
$17x + 8.50z = 64,600$

$17x + 8.50(-3x + 8500) = 64,600$
$17x - 25.5x + 72,250 = 64,600$
$-8.5x + 72,250 = 64,600$
$-8.5x = -7650$
$x = 900$

$y = 2(900)$
$y = 1800$

$3(900) + z = 8500$
$2700 + z = 8500$
$z = 5800$