would lead to the given number of solutions:

1. One solution

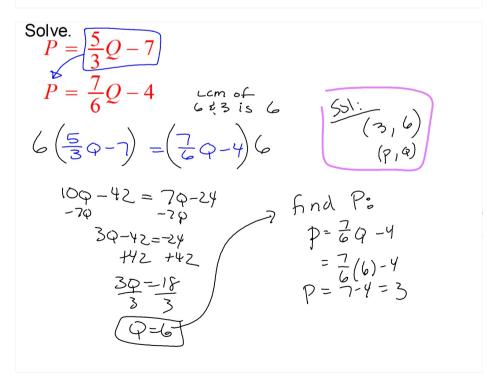
3. Many solutions:

The gym teacher ordered some basketballs and some footballs. The number of basketballs is three less than twice the number of footballs. Basketballs cost \$35 each and footballs cost \$28 each. The gym teacher spent a total of \$875.

Write and solve a system of equations to find the number of each kind of ball that was purchased.

## Solving a system of equations using Substitution:

- You must know what one of the variables "equals"
- Take information from one equation and place it into the other equation.



Solve.

2.

$$h = 3g + 5$$

$$7g - 2h = -8$$

$$7g - 2(3g + 5) = -8$$

$$7g - (3g + 5) = -8$$

- 4. In your piggy bank you have only nickels and dimes. There are a total of 31 coins that total \$2.25
- a) Write a system of equations involving n for nickels and d for dimes.

$$n+d=31$$
 .05 $n+10d=2.25$ 

b) Solve this system of equations to find the number of each kind of coin.

$$0.05(31-d) + .10d = 2.25$$
  
 $0.05(31-d) + .10d = 2.25$   
 $0.05(31-d) + .10d = 2.25$ 

I dimes

$$\frac{.05d = .70}{.05}$$

$$d = 14$$

$$n = 31 - d = 31 - 14 = 17$$

3. Solve this system of equations using Subsitution:

