Name $\qquad$ Date $\qquad$ Hour $\qquad$

## The Chimp Problem



One of Ming's tasks at the county zoo's primate house is to mix food for the chimpanzees. The combination of fiber nuggets and protein nuggets changes as the chimps grow from babies to adults. Ming uses the following recipes for mixing fiber and protein nuggets for each chimp.

- Baby chimps: 2 cups fiber nuggets and 3 cups protein nuggets per chimp.
- Young adult chimps: 6 cups fiber nuggets and 4 cups protein nuggets per chimp.
- Older chimps: 4 cups fiber nuggets and 2 cups protein nuggets per chimp.

1. Ming puts 48 cups of protein nuggets into the baby chimp mix. How many cups of high-fiber nuggets does she put into the mix? Explain.
2. Ming has a total of 125 cups of mix for baby chimps. How many cups of high-fiber nuggets are in the mix?
3. For every 1 cup of protein nuggets, how many cups of fiber nuggets should be used for young adult chimps?
4. If Ming uses 22 cups of fiber nuggets for older chimps, how many cups of protein nuggets should be used? Set up and solve a proportion.
5. Complete the table below for the baby chimp recipe.

| Baby Chimps |  |  |  |
| :---: | :---: | :---: | :---: |
| \# of <br> Chimps | Fiber (cups) | Protein (cups) | Total (cups) |
| 0 |  |  |  |
| 1 | 2 | 3 |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |


6. Looking at the baby chimps, describe any patterns that you see.
7. Graph the amount of protein, fiber and total below. Be sure to use different colors for protein, fiber and the total.


| Key |
| :---: |
| $\square$ Fiber |
| $\square$ Protein |
| $\square$ Total |

Number of Chimps

