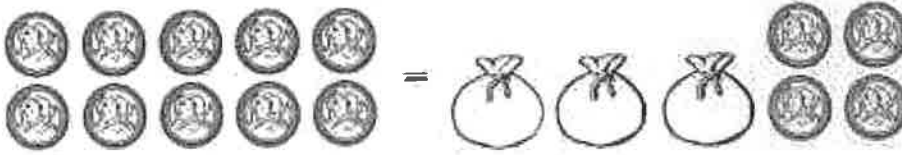


Problem 3.2 Exploring Equality

How many gold coins are in each pouch? Show your steps so that someone else could follow them.

1.



2.



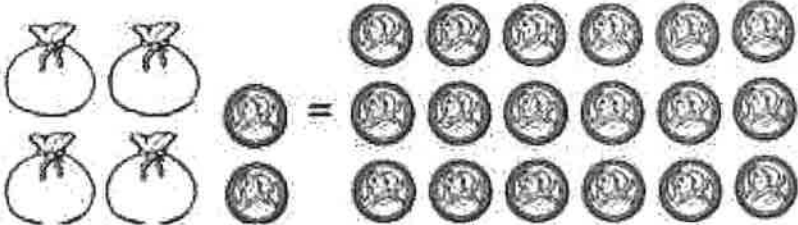
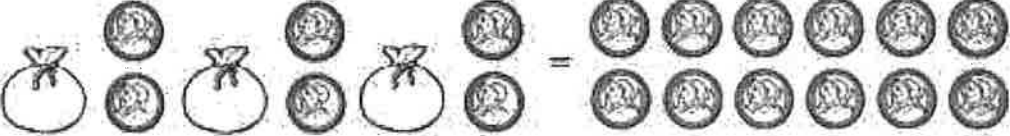
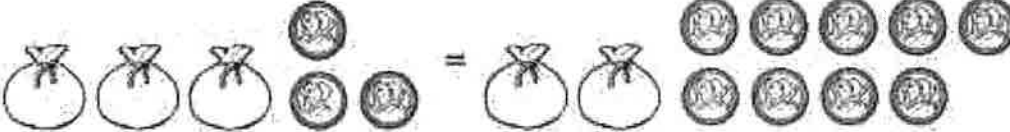
3. How can you check your answer? That is, how do you know you found the correct number of gold coins in each pouch?

4. How did you maintain equality at each step?

Problem 3.3 Writing Equations

Because the number of gold coins in each pouch is unknown, we can let x represent the number of gold coins in one pouch and use numbers to represent the number of coins. For each problem:

- Write an equation to represent the situation.
- Use the equation to find the number of gold coins in each pouch.

Manipulatives	Symbolic
<p>1.</p>  <p>The diagram shows 4 pouches and 2 individual coins on the left side of an equals sign. On the right side, there are 18 individual coins arranged in three rows of six.</p>	Equation:
<p>2.</p>  <p>The diagram shows 3 pouches and 4 individual coins on the left side of an equals sign. On the right side, there are 12 individual coins arranged in two rows of six.</p>	Equation:
<p>3.</p>  <p>The diagram shows 3 pouches and 3 individual coins on the left side of an equals sign. On the right side, there are 2 pouches and 10 individual coins arranged in two rows of five.</p>	Equation:

For each equation below, solve them using your ideas from the problems above. Check your answer.

4. $30 = 6 + 4x$

5. $7x + 2 = 12 + 5x$

6. Describe a general method for solving equation using what you know about equality.