**Finding the Whole Given a Part and a Percent**

**Modeling**

**Problem:**

***There are 14 candies in a bag that is 20% full. How many candies are in a full bag?***

**Step 1: Identify the information**

**Whole:** unknown (How many candies in a full bag?)

**Part:** 14 candies

**Percent:** 20%

**Step 2: Create a diagram**

0% 20% 100% 0% 20% 40% 60% 80% 100%

? ?

14 14 14 14 14 14

candies candies

**Answer:**

**If there are 14 candies in 20%, then I can fill in that amount in the other 20% sections of the bar. Then I can add all the quantities: 14 + 14 + 14 + 14 + 14 = 70**

A **function or input/output table** can be used in a similar way.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PERCENTAGE** | 0% | 20% | 40% | 60% | 80% | 100% |
| **PART** | 0 | 14 | 28 | 42 | 56 | 70 |

**Practice:**

1. 25% of what number is 10? 4. 10% of what number is 16?

1. 40 is 40% of what number? 5. 530 is 50% of what number?
2. 9 is 30% of what number? 6. 24% of what number is 54?