

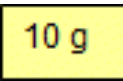
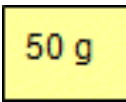
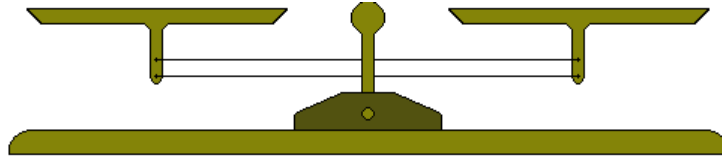


**PROBLEM ONE: RICE**

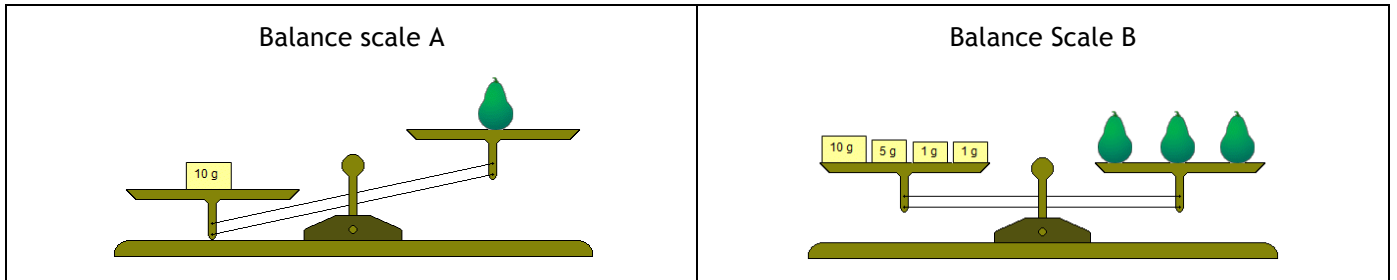
Imagine that you sell rice. You use a balance scale to weigh the rice. You have the following weights available:

Two 1g weights 	One 5g weight 	One 10g weight 	One 50g weight 
---	--	--	---

A customer comes in and wants to buy 39g of rice. On the balance scale below, show how you can weigh 39g of rice.



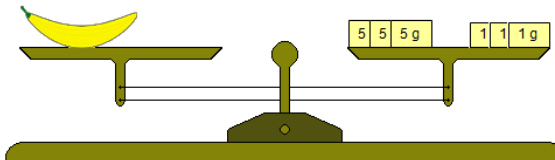
**PROBLEM TWO: PEARS**



Which balance scale can you use to find the weight of one pear: Balance Scale A or Balance Scale B? *Explain why you chose the scale that you did*

**PROBLEM THREE: KEEPING THE BALANCE**

This scale is balanced:

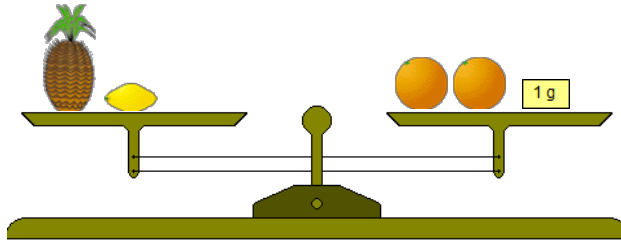


<p>What would the scale look like if you added 1g on the left side? Draw a picture below:</p>	<p>Describe <i>two</i> ways that you could make the scale balance again.</p>
---	--

**PROBLEM FOUR: IS IT BALANCED?**

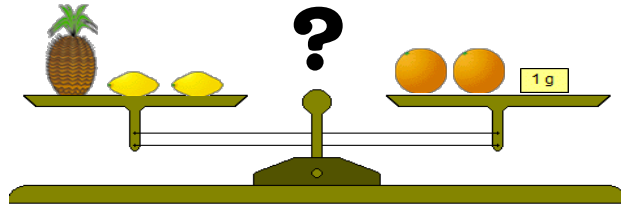
For each pair of scales below, the top scale is balanced. Will the bottom scale be balanced? How do you know?

(a) This scale is balanced

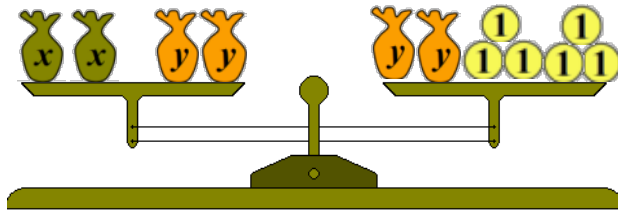


Will this be balanced?

How do you know?

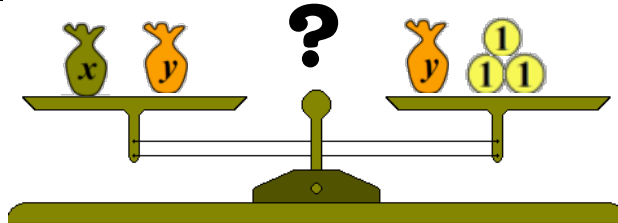


(b) This scale is balanced



Will this be balanced?

How do you know?

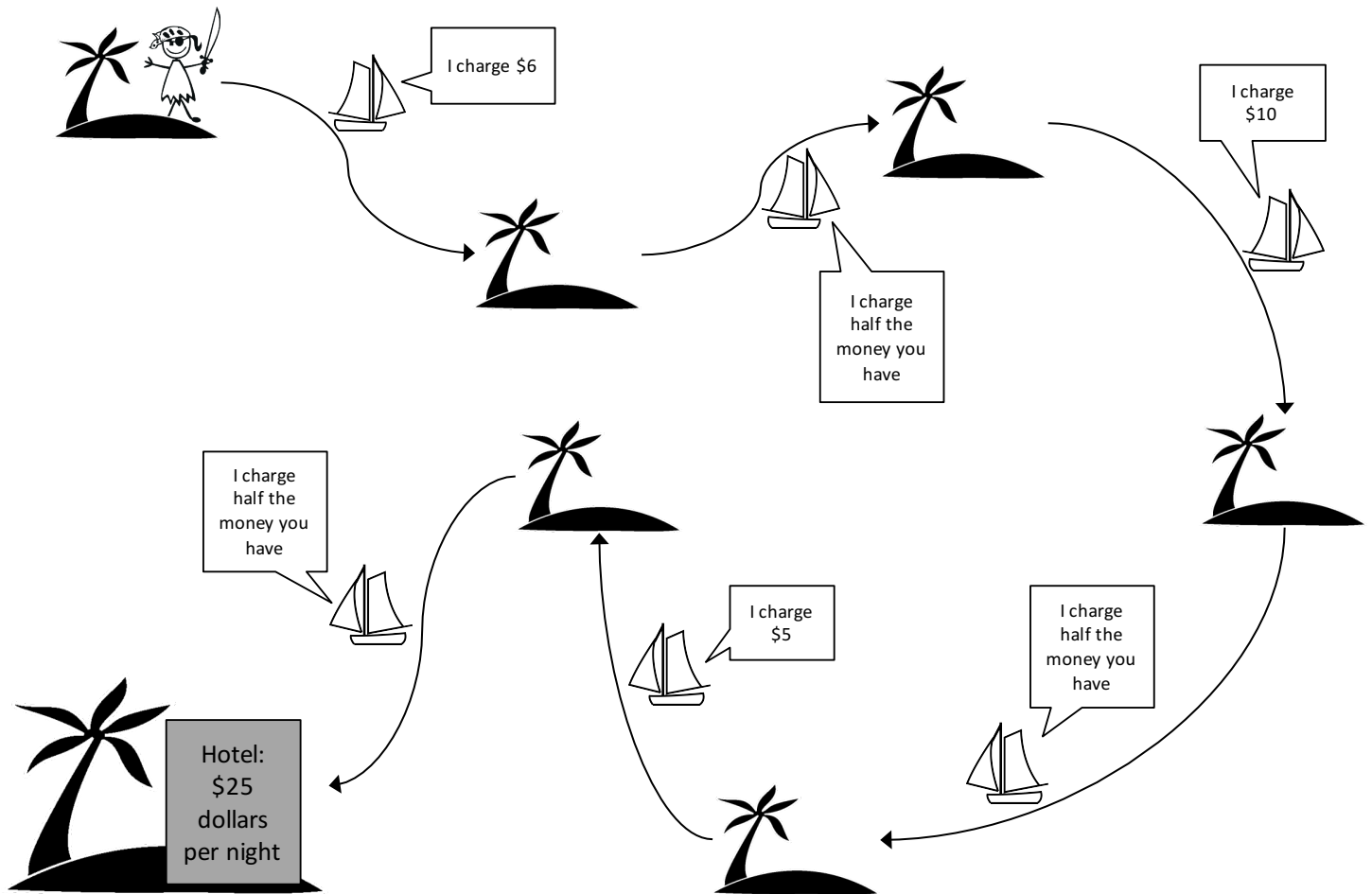


**CHALLENGE PROBLEM**

Go back to problem 1. Make a list of all the rice weights that you can measure using your weights. How do you know that you have all of them?

### PROBLEM FIVE: THE LONELY PIRATE

How much money does the pirate need to get to the hotel and stay for one night?

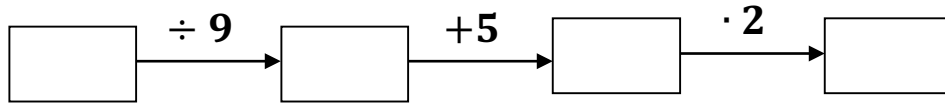


### PROBLEM SIX: NUMBER TRICKS

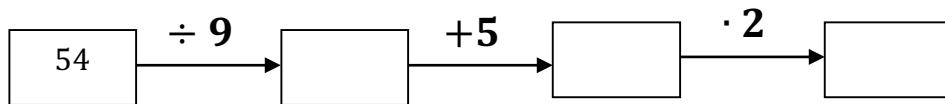
Sabrina is a number magician! She takes one number and turns it into another one. One of her favorite tricks is this:

- Start with a number
- Divide it by 9
- Add 5
- Multiply by 2
- Say the new number!

She uses an arrow chain to represent this number trick:

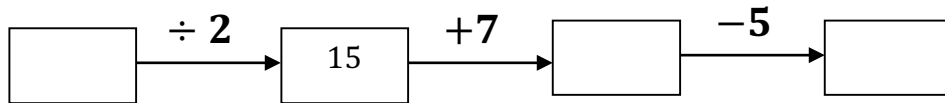


Use the arrow chain to show what happens if she starts with 54:

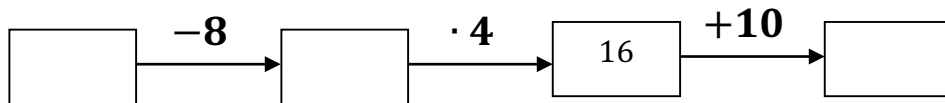


Sabrina had a bunch of number tricks diagramed, but her computer had a glitch and only some of her data were saved. Help her recover her missing data by completing the arrow chains.

- The *whamo-kazam* trick:



- The *ohh-ahh-dang!* trick:



- The *can-you-believe-it* trick:

