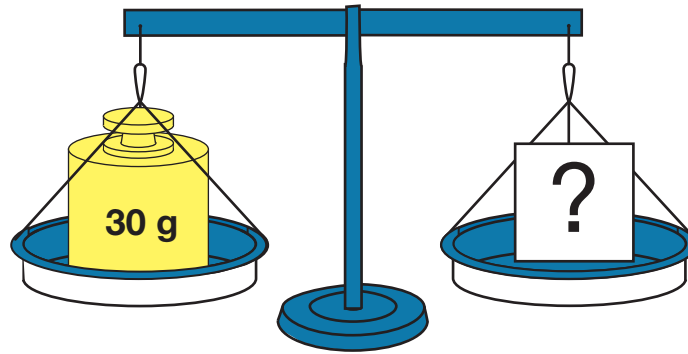


Balanced and Equal

Use a Two-Pan Balance

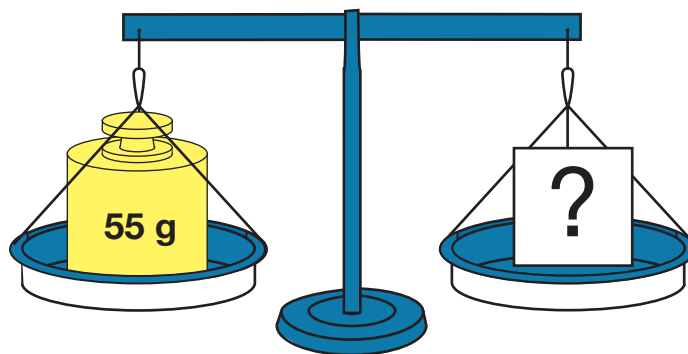
Use a two-pan balance and a set of standard masses. Place the number of grams listed in one pan. Use different gram masses in the other pan to balance the scales. Write number sentences to show two different ways to balance the pans.

Example: 30 grams



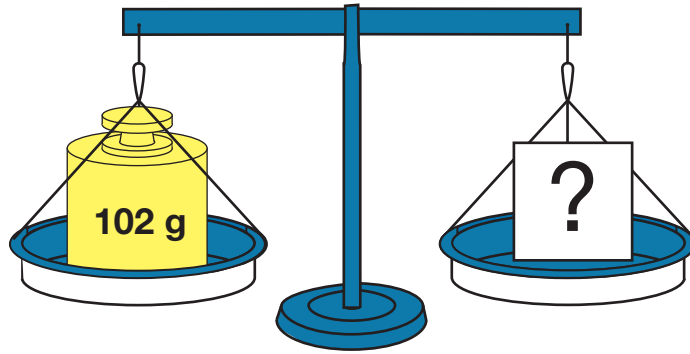
One way $10 + 10 + 10 = 30\text{ g}$
 Another way $5 + 10 + 5 + 10 = 30\text{ g}$

1. 55 grams



One way _____
 Another way _____

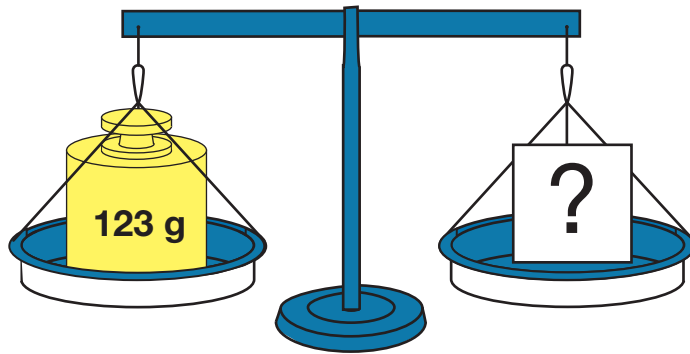
2. 102 grams



One way _____

Another way _____

3. 123 grams



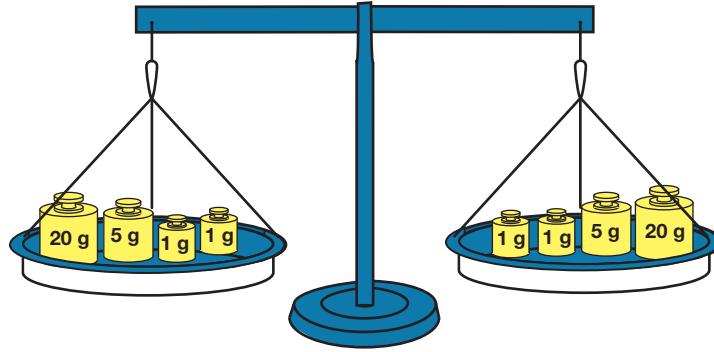
One way _____

Another way _____

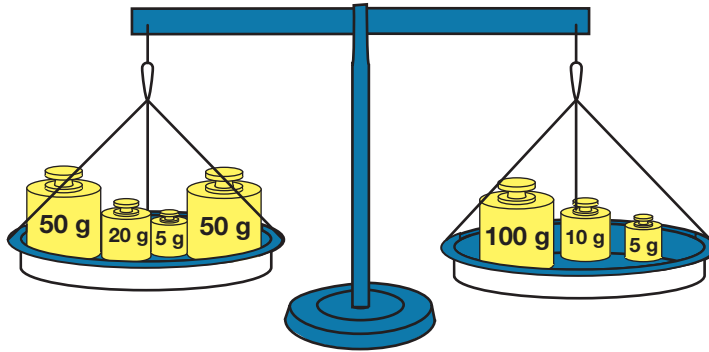
Add Mass

4. Circle the two-pan balances that will balance.

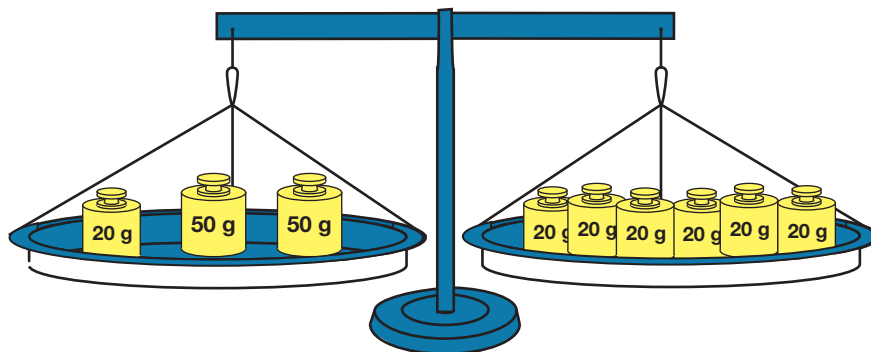
A.



B.

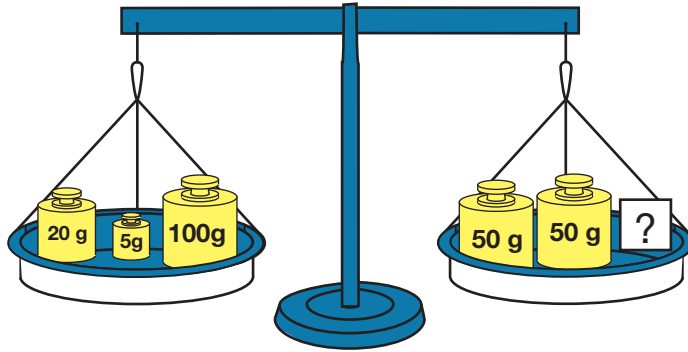


C.



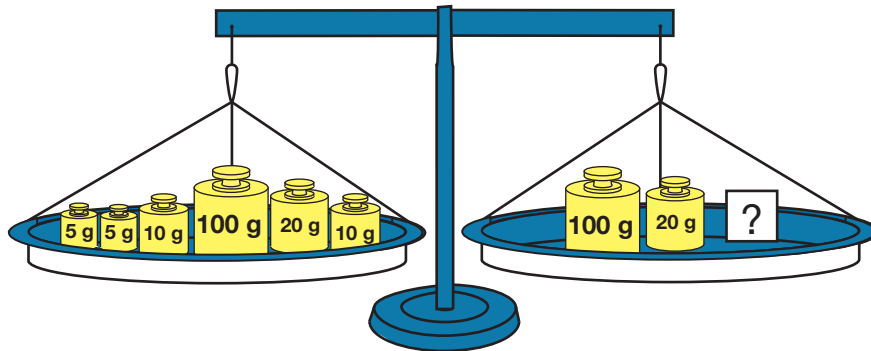
5. What will make the two pans balance?

A.



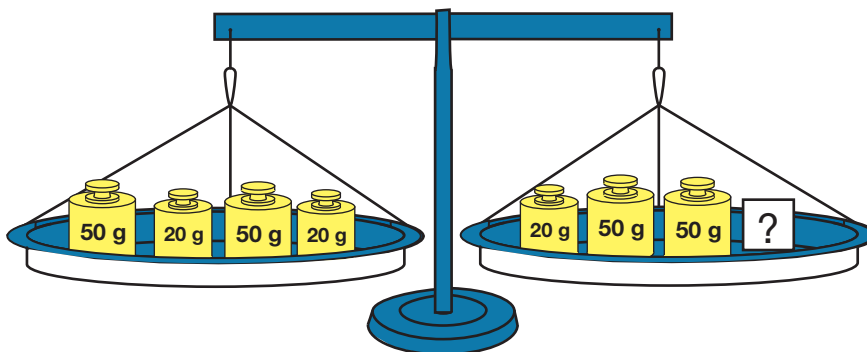
$$20 + 5 + 100 = 50 + 50 + \underline{\hspace{2cm}}$$

B.



$$5 + 5 + 10 + 100 + 20 + 10 = 100 + 20 + \underline{\hspace{2cm}}$$

C.

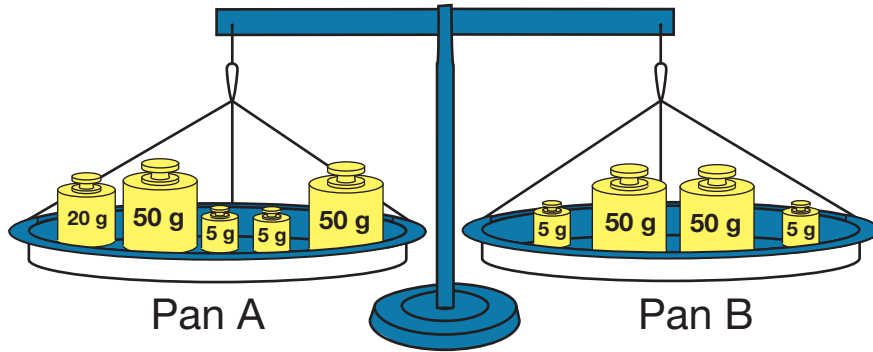


$$50 + 20 + 50 + 20 = 20 + 50 + 50 + \underline{\hspace{2cm}}$$



Check-In: Questions 6–8

6. Natasha put these gram masses in a two-pan balance.



$$20 + 50 + 5 + 5 + 50$$

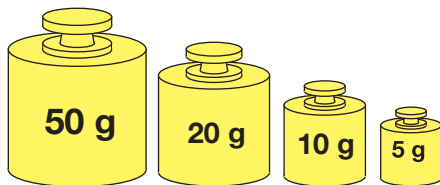
$$5 + 50 + 50 + 5$$

A. Will the pans balance? _____

B. If not, what can she put in Pan B to make the pans balance? Write a number sentence to show the gram masses she can use.

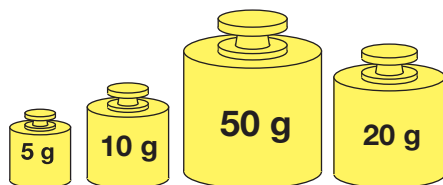
$$20 + 50 + 5 + 5 + 50 = \underline{\hspace{10em}}$$

7. A. Find the total value of Kim's gram masses.



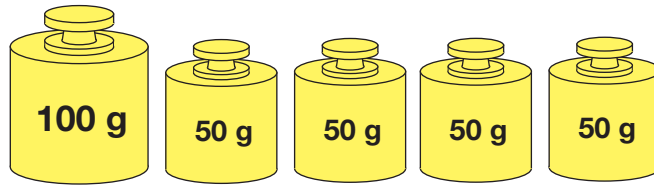
_____ grams

B. Darius changed the order of Kim's gram masses and added.



_____ grams

8. Find the total value of Mark's gram masses:



- A. Start by adding $100 + 50$. Finish the number sentence and find the sum.

$$100 + 50 + \underline{\hspace{2cm}}$$

- B. Start by adding $50 + 50$.

$$50 + 50 + \underline{\hspace{2cm}}$$

- C. Do you get the same answer? Why or why not? Show or tell how you know.

- D. Sam said, "If you start by adding the 100-gram mass first, you will get a greater sum than if you start with 50 because 100 is greater than 50." Do you agree or disagree? Why?

Name _____ Date _____

**Balanced and Equal
Check-In: Q# 6–8
Feedback Box**

	Expectation	Check In	Comments
Compose and decompose numbers using ones, fives, tens, twenties, fifties, and hundreds. [Q# 6, 7A]	E1		
Recognize that different partitions of a number have the same total (e.g., $50 + 4 = 40 + 14$). [Q# 6–7]	E4		
Apply the properties of addition (e.g., commutative, associative) to write number sentences that represent mass. [Q# 7–8]	E5		

Yes . . .

Yes, but . . .

No, but . . .

No . . .

MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking.				