

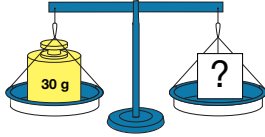
Name _____ Date _____

Balanced and Equal

Use a Two-Pan Balance

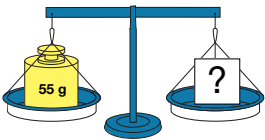
Use a two-pan balance and a set of standard masses. Place the number of grams listed in one pan. Use different gram masses in the other pan to balance the scales. Write number sentences to show two different ways to balance the pans.

Example: 30 grams



One way $10 + 10 + 10 = 30$ g
 Another way $5 + 10 + 5 + 10 = 30$ g

1. 55 grams



One way _____
 Another way _____

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**Balanced and Equal (SAB pp. 395–400)
 Questions 1–8**

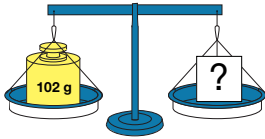
Answers will vary. Possible answers given for Questions 1–3.

1. $10 + 10 + 10 + 20 = 50 = 50$
 $20 + 5 + 20 + 10 = 55 = 55$
2. $50 + 50 + 1 + 1 = 102$
 $10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 1 + 1 = 102$
3. $50 + 50 + 20 + 1 + 1 + 1 = 123$
 $100 + 10 + 10 + 1 + 1 + 1 = 123$
4. Students should circle the masses in Questions 4A and 4C to show that these combinations will balance.

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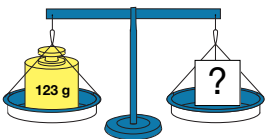
Name _____ Date _____

2. 102 grams



One way _____
 Another way _____

3. 123 grams



One way _____
 Another way _____

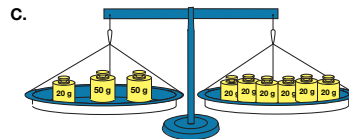
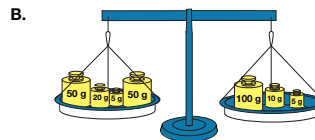
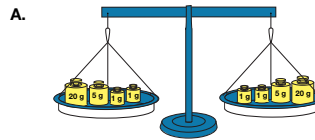
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Add Mass

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



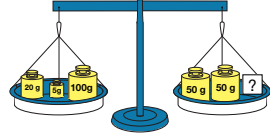
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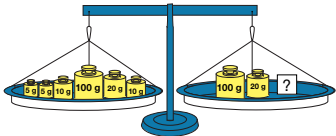
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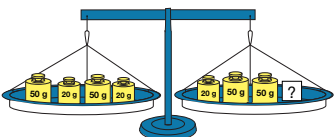
5. A. 25
 B. 30
 C. 20
6. A. No
 B. Possible response: She could add 20 grams to pan B; $5 + 50 + 50 + 5 + 20 = 130$
7. A. 85 g
 B. Possible response: Yes, because both sides of the equal sign amount to 85 grams. I can add the numbers in any order.
8. A. $100 + 50 + 50 + 50 + 50 = 300$
 B. $50 + 50 + 50 + 50 + 100 = 300$
 C. Possible response: Yes, I got the same answer because I can group and add the numbers in any way that makes sense to me.
 $100 + 50 + 50 + 50 + 50 = 50 + 50 + 50 + 50 + 100$
 D. Possible response: Sam is not correct. You can group and add numbers in any order in an addition number sentence and you will get the same sum.

Name _____ Date _____

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

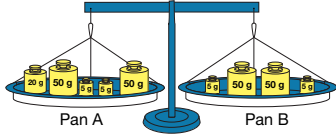
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✓ Check-In: Questions 6-8

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




Pan A $20 + 50 + 5 + 5 + 50$ Pan B $5 + 50 + 50 + 5$


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

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

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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 80 because 100 is greater than 50." Do you agree or disagree? Why?

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