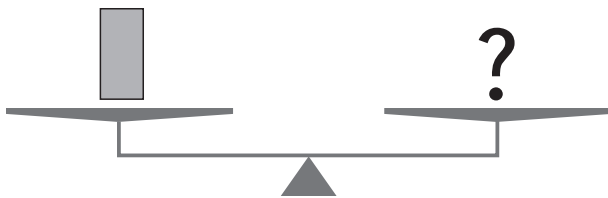
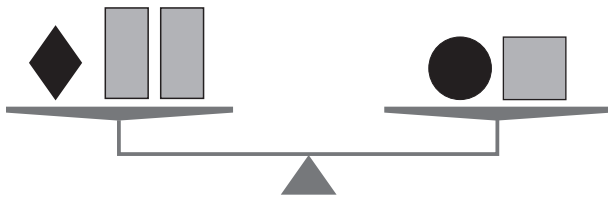
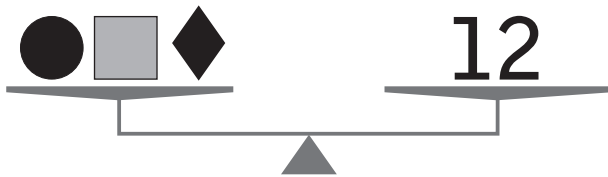
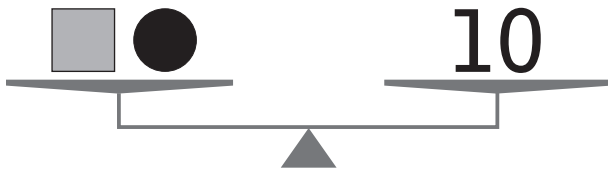


Balance Benders™



Which answer can replace the question mark?



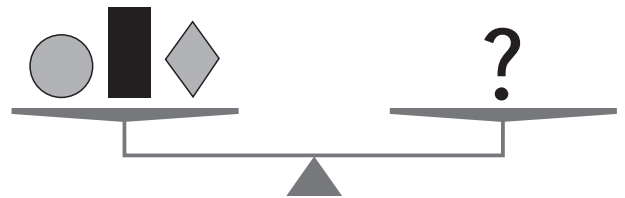
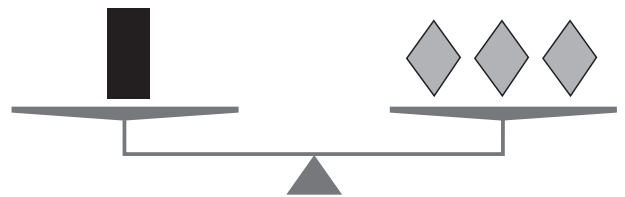
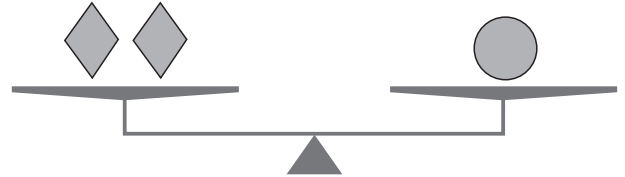
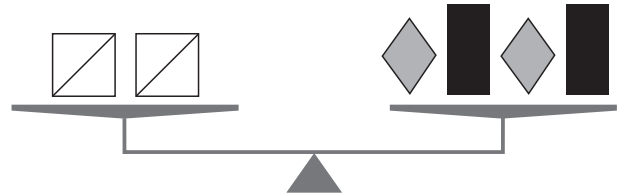
a. 2

b. 4

c. 6

d. 8



Hint: From 1st balance, substitute 10 for ● on 2nd balance.



a.  

b.  





c.  

d.  



















Hint: From 3rd balance, substitute ● for each ■ on 1st balance.

Answers

Page 21 Problem 1: b

From 1st balance, substitute 10 for   on 2nd balance so $10 + \text{black diamond} = 12$. Subtract 10 from both pans so $\text{black diamond} = 2$. From 1st balance, substitute 10 for   on 3rd balance so $\text{black diamond} + \text{gray rectangle} = 10$. Substitute 2 for black diamond so $\text{gray rectangle} + 2 = 10$. Subtract 2 from both pans so $\text{gray rectangle} = 8$. Divide in half so $\text{gray rectangle} = 4$.

Page 21 Problem 2: d

From 3rd balance, substitute    for each  on 1st balance so $\text{white square with diagonal} + \text{white square with diagonal} = \text{gray diamond} + \text{gray diamond} + \text{gray diamond} + \text{gray diamond} + \text{gray diamond} + \text{gray diamond} + \text{gray diamond} + \text{gray diamond}$. Divide in half so $\text{white square with diagonal} = \text{gray diamond} + \text{gray diamond} + \text{gray diamond}$ or $\text{white triangle} = \text{gray diamond} + \text{gray diamond}$. From 2nd balance, substitute   and from 3rd balance, substitute    for  and  respectively, on 4th balance. We now have        = ? Substitute from above so $\text{white square with diagonal} + \text{white triangle} =$