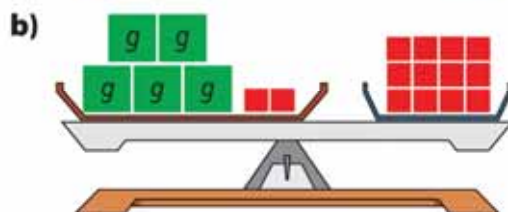
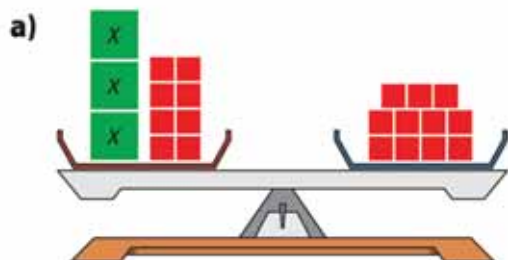


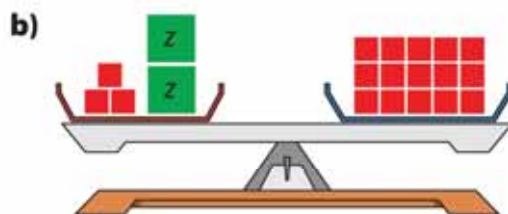
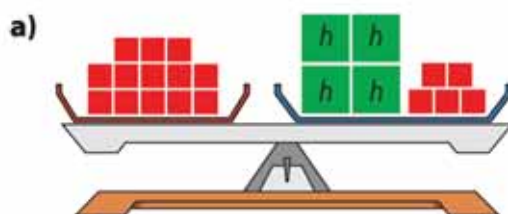
# Check Your Understanding

## Practise

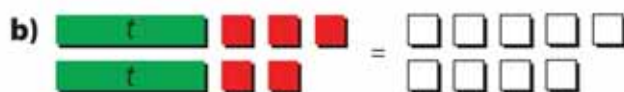
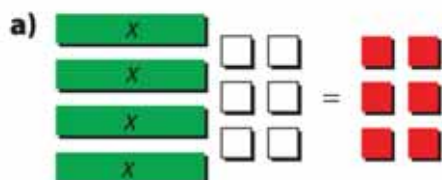
3. Solve the equation modelled by each balance scale. Check your solution.



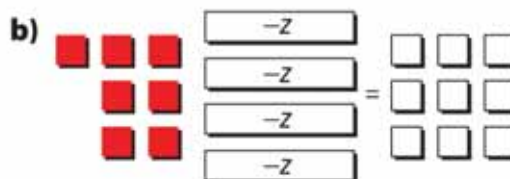
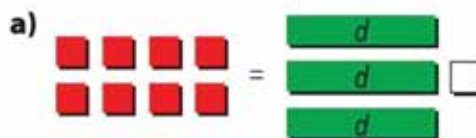
4. Solve the equation represented by each balance scale. Verify your solution.



5. Solve each equation modelled by the algebra tiles. Check your solution.



6. Solve each equation represented by the algebra tiles. Verify your solution.



7. What is the first operation you should perform to solve each equation?

- $4r - 2 = 14$
- $3 - 3x = -9$
- $-22 = -10 + 2m$
- $53 = -9k - 1$

8. What is the second operation you should perform to solve each equation in #7?

9. Solve each equation. Check your answer.

- $6r + 6 = 18$
- $4m + 8 = 12$
- $39 + 9g = 75$
- $-37 = 8f - 139$

10. Solve. Verify your answer.

- $-17 = 3k + 4$
- $29 = -14n + 1$
- $8x - 7 = -31$
- $-10 = 4n - 12$

## Apply

11. Show whether  $x = -3$  is the solution to each equation.
- $-8x - 1 = 25$
  - $3 - 7x = -24$
  - $29 = -10x - 1$
  - $30 = 6x + 12$
12. Matt is saving \$750 to buy a clothes dryer. If he triples the amount he has saved so far, he will have \$30 more than he needs. The situation can be modelled as  $3s - 30 = 750$ , where  $s$  represents the amount he has saved so far.
- Explain how  $3s - 30 = 750$  models the situation.
  - How much money has Matt saved so far?
  - What other strategy could you use to determine Matt's savings?
13. You are buying lunch at Sandwich Express. The cost is \$4 for a sandwich and \$2 each for your choice of extras. You have \$10. The equation to determine how many extras you can get is  $10 = 2e + 4$ , where  $e$  is the number of extras. How many extras can you buy if you spend all of your money?

## MENU

Your choice of extras,  
only \$2 each:  
salad, fries, milk,  
juice, jumbo cookie,  
frozen yogurt.

14. The percent of elementary school students who choose hockey as their favourite physical activity is 14%. This percent of students is 2% more than four times the percent who choose skiing.
- Let  $s$  represent the percent of students who choose skiing. What equation models this situation?
  - Solve the equation to find the percent of students who choose skiing.
15. If Jennifer doubled the money that she has in her account now and then took out \$50, she would have enough left in her account to buy a new bike that costs \$299. Write and solve an equation to determine how much money Jennifer has now.
16. A classroom's length is 3 m less than two times its width. The classroom has a length of 9 m. Write and solve an equation to determine the width of the classroom.
17. An eagle is hunting a bird in flight. The eagle begins its descent from a height of 74 m. The eagle reaches its prey at a height of 3 m. This situation can be modelled using the formula  $74 = 3 + 6t$ , where  $t$  represents the time in seconds.



- What do you think the value of 6 represents in the equation?
- After how many seconds does the eagle reach its prey? Give your answer to the nearest tenth of a second.