

# 9.50 - Questions Handout #s 1 - 22 NOT 8, 11, 13, 19

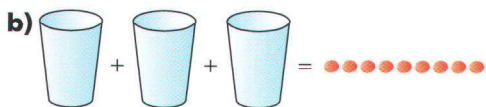
## Key Words

Match each example with the correct term.

- |   |                             |
|---|-----------------------------|
| 1. $\geq$                                     | A variable                  |
| 2. $\div$ and $\times$                        | B inequality                |
| 3. For $x < 3$ ,<br>this would be<br>0, 1, 2. | C greater than              |
| 4. 0, 1, 2, 3, 4, ...                         | D less than or equal to     |
| 5. $y$ in $7y \leq 9y$                        | E whole number solution set |
| 6. $x > 100$                                  | F greater than or equal to  |
| 7. $\leq$                                     | G opposite operations       |
|   | H whole numbers             |

## 12.1 Model and Solve Equations, pages 388–393

8. Solve the equation modelled by each diagram.



9. Model each equation. Then, solve using the opposite operation.

- a)  $w + 9 = 15$   
 b)  $26 = 4x$   
 c)  $40 = y \div 5$   
 d)  $1 = z - 4$

10. Solve each equation. Verify your solution.

- a)  $2m = 62$       b)  $c \div 3 = 7$   
 c)  $16.5 = 8.25y$       d)  $d - 10 = 15$   
 e)  $9 = 4 + k$       f)  $6.3 = x \div 4$

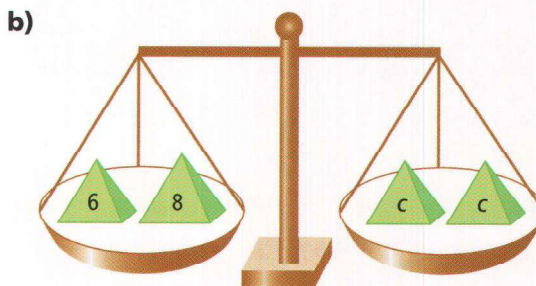
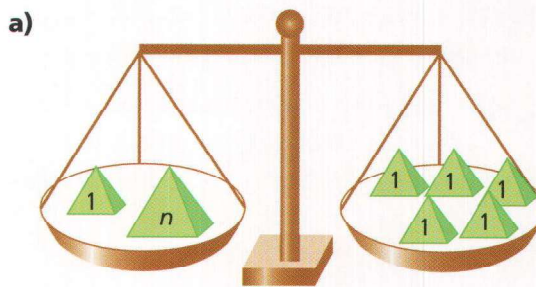
11. Describe a situation that can be modelled with each formula. Define the variable.

- a)  $12m = 364$       b)  $d \div 24 = 60$

12. A photocopy company charges 3.4¢ per copy. A recent bill for a large customer came to \$40 851. This can be modelled using the equation  $3.4p = 40\ 851$ , where  $p$  represents the number of photocopies. How many photocopies were made?

## 12.2 Apply the Opposite Operations, pages 394–399

13. Solve the equation modelled by each diagram. Check your solution.





14. For each equation, what operation will you undo first? Why?

- a)  $2k + 5 = 19$
- b)  $20.9 = 3y - 1$
- c)  $16 = 1 + 6n$
- d)  $12x - 7 = 29$

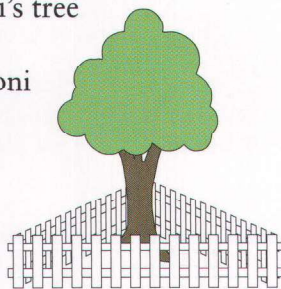
15. Solve each equation in question 14. Verify your solution.

16. A hawk is hunting its prey. It begins its descent from a height of 63 m. This can be modelled using the formula  $63 - h = 5.4t$ , where  $t$  represents the time, in seconds, and  $h$  represents the height, in metres, above the ground. After how many seconds will the hawk reach a height of 5 m? Round your answer to the nearest 0.1 s.

### 12.3 Model Problems With Equations, pages 400–404

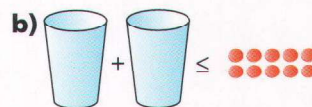
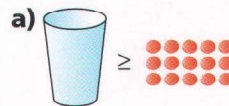
17. Annie charges \$35 per month plus \$9.50 per hour to cut grass. Annie charges one customer \$63.50 for July.
- a) Write an equation to model this situation. Define your variables.
  - b) How many hours did Annie spend cutting grass in July for this customer?

18. The fence around Toni's tree is in the shape of an equilateral triangle. Toni wants to increase the length of each side by 5 cm. The perimeter of her new fence will be 66 cm. What is the original perimeter?



### 12.4 Explore Inequalities, pages 405–411

19. Model each diagram using an inequality. Then, find the whole number solution set.



20. Model each situation using an inequality.

- a) There are fewer than 20 horses on the farm.
- b) He invites up to four people to his cottage.
- c) At least 35% of the music played on the radio is by a Canadian.

21. Find the whole number solution set for each inequality.

- a)  $j + 4 > 35$
- b)  $17 < w - 3$
- c)  $2g \leq 12$
- d)  $5 + 3 \geq m$

22. A family has a monthly budget of \$1800 for food, rent, and clothing. They spend \$1050 per month on rent and \$630 for food. Develop an inequality modelling the money available for clothing each month.

Monthly Budget		\$1800
1	food	\$630
2	rent	\$1050
3	clothing	
4		
5		