

## Writing Expressions Involving Variables

1. Write a simple expression for each problem. Define a variable if you use one.

- Caden bought 8 boxes of granola bars. There are  $b$  granola bars in each box.
- Joel has 16 times as many photographs as Lola.
- Lillian bought  $t$  T-shirts. The shirts came in 10 packages.
- Lexi has 60 buttons. Perry has  $b$  more buttons than Lexi.
- Rhianna had 25 books. Then she went to a book sale and bought 20 more books.

Solution:

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2. Sweetcake baking company baked 10 trays of 48 cookies each. They divided and packed the cookies evenly into  $n$  bags. How many cookies did they place in each bag?

Solution:

3. Sal's pizza shop had orders for 25 vegetable, 63 pepperoni, and 82 cheese pizzas. If  $c$  cooks were assigned to make pizzas, how many pizzas did each cook make?

Solution:

4. Little Jane and  $p$  adults came to La Foret Restaurant. On the dinner table, there are two plates for each adult and only one plate for little Jane. How many plates are on the table?

Solution:

5. A city has 26 courier service offices. In 20 of the offices, there are  $w$  workers each. The remaining 6 offices have 8 workers each. How many total workers are there?

Solution:

6. Kayla makes quilts. She can make 9 quilts with  $y$  yards of material. How many yards of material would be required to make 10 quilts? Choose the expression that fits the story.

Solution:

a.  $\frac{9}{y} \times 10$

c.  $\frac{y}{9} \times 10$

b.  $(9 \times y) + 10$

d.  $(y - 9) \times 10$

7. A large vase can hold  $f$  flowers. If you had 15 tulips and 39 orchids, how many vases would you need to hold the flowers?

Solution:

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### Answer Key

1.
  - a.  $8b$  where  $b$  = number of granola bars in each box
  - b.  $16p$  where  $p$  = number of Lola's photographs
  - c.  $t \div 10$  where  $t$  = total number of shirts
  - d.  $60 + b$  where  $b$  = the difference between Lexi and Perry's buttons
  - e.  $25 + 20$
2.  $(10 \times 48) \div n$  where  $n$  = number of bags
3.  $(25 + 63 + 82) \div c$  where  $c$  = number of cooks
4.  $(p \times 2) + 1$  where  $p$  = number of adults
5.  $(20 \times w) + (6 \times 8)$  where  $w$  = number of workers in each of the 20 offices
6.  $C$
7.  $\frac{(15+39)}{f}$