

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

### Math 8: One-Step Equations Word Problems (Writing Algebraic Expressions)

Write an expression for each word phrase.

1. a number  $x$  divided by 7

\_\_\_\_\_

2. the sum of 10 and a number  $n$

\_\_\_\_\_

3. a number  $b$  decreased by 14

\_\_\_\_\_

4. the product of a number  $x$  and 8

\_\_\_\_\_

5. 12 times the difference of a number  $r$  and 7

\_\_\_\_\_

6. 11 minus the product of 5 and a number  $k$

\_\_\_\_\_

7. a. Grace wants to divide the job of writing  $x$  invitations to the party equally among 4 committee members. Write an expression to determine the number of invitations she will have each committee member write.

---

b. If Grace has 220 invitations for the committee members to write, how many will she have each member write?

---

Write an algebraic expression and use it to evaluate each word problem.

8. Arturo purchased a package of 50 blank CDs. After he used  $x$  CDs, he had  $x$  less than 50 CDs remaining. How many CDs did he have left after using 31 CDs?

---

9. At the grocery store, Henry bought  $c$  pounds of cashews for \$4.99 per pound. If he buys 2 pounds, how much will they cost?

---

**10.** The school library is combining books from two storage unit into a newly designed area for the library. The first original unit held 186 books and the second unit had 307 books. Write and solve an equation to find the number of books in the new area of the library.

---

**11.** Amelia wanted to buy a new computer and printer which had a total cost of \$1099.95. She had saved \$389.85 for her purchase. How much more does she need to save to buy the computer and printer she wants?

---

**12.** Ashley saves \$32 from her weekly paycheck for her college education. This is  $\frac{1}{5}$  of her weekly salary. How much does she earn each week? Write and solve an equation to determine the amount Ashley earns each week.

---

**13.** Hunter bought a package of 24 pencils for \$3.12. Write and solve an equation to determine the cost of each pencil in the package.

---

**14.** Austin High School had an enrollment of 1,428 students. In May, they graduated 418 students. How many students are still enrolled in the school?

---

**15.** Mr. Otten saved \$32 each week for 26 weeks. How much did he save in that time?

---

**16.** Jessica baked 10 dozen cookies. She left  $\frac{1}{8}$  of the baked cookies home and took the rest to school for the bake sale. How many cookies did Jessica take to school?

---

**17.** Doug must take 1.25 milliliters of medicine every day. How many days will the medicine last if Doug was given a prescription of the medicine in a bottle containing 50 milliliters?

---