

Day 7 – Creating Expressions from a Context Practice

For each word problem, show the work to how you arrived at your answer for parts A and B. Define the quantity that is changing each time in part C. Using your work, create an algebraic expression for part D.

1. Conner gets \$20 per week allowance. He also makes \$10 per lawn he mows. He saves half of his money each week. Let's look at what he gets for ONE week.

a. If he mows 3 lawns, how much will he have to spend?

$$\frac{1}{2}(10(3) + 20) = \$25$$

b. If he mows 8 lawns, how much will he have to spend?

$$\frac{1}{2}(10(8) + 20) = \$50$$

c. What quantity is changing each time? What variable will represent this quantity?

number of lawns mowed $\rightarrow l$

d. Write an expression to represent the scenario.

$$\frac{1}{2}(10l + 20)$$

2. Katherine is trying to read as many books as possible this semester. Her father will give her a quarter for every book she reads. She has already read 17 books.

a. If she reads 30 more books, how much money will her father owe her?

$$.25(30 + 17) = \$11.75$$

b. If she reads 42 more books, how much money will her father owe her?

$$.25(42 + 17) = \$14.75$$

c. What quantity is changing each time? What variable will represent this quantity?

number of books read $\rightarrow b$

d. Write an expression to represent the scenario.

$$.25(b + 17)$$

3. Four students are assigned a project. They must each write an even portion of their summary paper. They each already wrote one page of introduction.

a. If the paper is to be 32 pages long, how many more pages does each student need to write?

$$\frac{32 - 4}{4} = 7 \text{ pages per person remaining}$$

b. If the paper is to be 64 pages long, how many more pages does each student need to write?

$$\frac{64 - 4}{4} = 15 \text{ pages per person remaining}$$

c. What quantity is changing each time? What variable will represent this quantity?

length of paper pages $\rightarrow p$

d. Write an expression to represent the scenario.

$$\frac{p - 4}{4}$$

4. pages
written
total