

## Day 6 – 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.

a. You buy 100 yo-yos to give away as prizes at a carnival.

a. If 12 people win a prize, how many yo-yos will you have left?

$$100 - 12 = 88 \text{ yo-yos}$$

b. How many yo-yos will you have if 34 people win a prize?

$$100 - 34 = 62 \text{ yo-yos}$$

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

number of yo-yos  $\rightarrow y$

d. Write an expression to represent the scenario.

$$100 - y$$

b. Bulk trail mix costs \$1.95 per pound.

a. If you purchase 4 pounds of trail mix, how much will that cost?

$$1.95(4) = \$7.80$$

b. If you purchase 7 pounds of trail mix, how much will that cost?

$$1.95(7) = \$13.65$$

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

number of pounds  $\rightarrow p$

d. Write an expression to represent the scenario.

$$1.95p$$

c. The charge for ice skating is \$3 for the skate rental and \$2 per hour to skate.

a. How much will you pay for 4 hours of skating?

$$3 + 2(4) = \$11$$

b. How much will you pay for 5½ hours of skating?

$$3 + 2(5.5) = \$14$$

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

number of hours  $\rightarrow h$

d. Write an expression to represent the scenario.

$$3 + 2h$$

d. You have \$15 to spend at the snack bar. All of the snacks at the snack bar cost \$1.50 each.

- a. How much money will you have left if you buy 3 snacks?

$$15 - 1.50(3) = \$10.50$$

- b. How much money will you have left if you buy 6 snacks?

$$15 - 1.50(6) = \$6.00$$

- c. What quantity is changing each time? What variable will you use to represent this quantity?

number of snacks you buy  $\rightarrow s$

- d. Write an expression to represent the scenario.

$$15 - 1.50s$$

e. Atlanta City Cab charges \$3.30 as an initial fee the minute the customer enters the cab. The company then charges \$2.40 per mile.

- a. How much will it cost to ride if the cab travels 10 miles?

$$3.30 + 2.40(10) = \$27.30$$

- b. How much will it cost to ride if the cab travels 13.5 miles?

$$3.30 + 2.40(13.5) = \$35.70$$

- c. What quantity is changing each time? What variable will you use to represent this quantity?

number of miles  $\rightarrow m$

- d. Write an expression to represent the scenario.

$$3.30 + 2.40m$$

f. Caitlin has \$200 in her savings account. She withdraws \$15 each week.

- a. How much will she have remaining after 5 weeks?

$$200 - 15(5) = \$125$$

- b. How much will she have remaining after 9 weeks?

$$200 - 15(9) = \$65$$

- c. What quantity is changing each time? What variable will you use to represent this quantity?

number of weeks  $\rightarrow w$

- d. Write an expression to represent the scenario.

$$200 - 15w$$