

Quantities and Descriptive Modeling - Guided Lesson Explanation**Explanation#1**

Lets look at the scenarios they provide us with.

a. Letter a will save us 10 km per liter (70 – 60).

Our improved gas consumption is $\frac{10}{60} \times 100 = 16.66 \%$

Our gas economy increased by (16.66 %)

b. Letter b will save us 10 km per liter (65 – 60).

Our improved gas consumption is $\frac{5}{60} \times 100 = 8.33 \%$

Our gas economy increased by (8.33 %)

So, according to this letter a is a better savings. The answer is a.

Explanation#2

We can solve this question in many ways. We can see that bigger bottle cost more, but provide us more liters of soft drink at least per liter.

The best thing to do is to find the price per unit (liter).

Small = 1 liter for \$10 = $10/1$ = \$10/ liter

Medium = 3 liters for \$25 = $25/3$ = \$8.33 /liter

Large = 7 liters for \$45 = $45/7$ = \$6.43/liter

The most cost effective way is buy as much of the large as possible.

\$90 = 2 (\$45 soda packs)

= 2 Large packs



Name _____

Date _____

Explanation#3

a. Letter a will save us 1 watts per hour (4 – 3).

Our improved electricity consumption is $\frac{1}{3} \times 100 = 33.33 \%$

Our electricity economy increased by (33.33 %)

b. Letter b will save us 2.5 watts per hour (4 units – 2.5 units).

Our improved electricity consumption is $\frac{1.5}{2.5} \times 100 = 60 \%$

Our electricity economy increased by (60%)

So, according to this letter a is a better savings. The answer is a.

