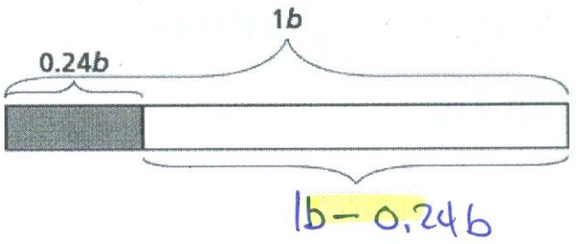
2 EXPLORE Calculating Markdowns

Keeley is selling bicycles. For the holiday sale, she will mark down each bike's selling price by 24%.



A The markdown is 24 % of the price, *b*.

B Find the amount of the markdown. Use a bar model.

The white bar represents the cost of the bike, b − 0.24b.

The grey section is 24 % of b.

This can be written as a decimal, 0.24

C Subtract 0.24b from the price of the bike to find the sales price.

Sales price = b − 0.24b

Price of bike Markdown

D You can combine like terms in the expression and write the sales price as a single term. Sales price = 0.76b

REFLECT

2a. Conjecture Compare the markup expression from **1** and the markdown expression from **2** . What do you notice about the decimal value in front of the variable for markups and the decimal value in front of the variable for markdowns?

MARK-UPS THE DECIMAL IS ADDED TO 1.

MARK-DOWNS THE DECIMAL IS SUBTRACTED FROM 1.

TRY THIS!

1. Rick buys remote control cars to resell. He applies a markup of 10%. Write two expressions that represent the price of the cars.

1c = c + 0.10c 1.1c = 1.10c

2. Jane sells pillows. For a sale she marks them down 5%.

   a. Write two expressions that represent the sale price of the pillows. p − 0.05p = 0.95p

   b. If a pillow originally costs $15, what is the sale price?

0.95(15) = $14.25

$\frac{1.50}{2} = 0.75$