

## 6.6 Discounts and Mark-Ups

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### Learning Targets

- ✓ • Find Sale Price
- ✱ • Find an Original Price
- ✓ • Find a Selling Price
- Find a Discount

**Discount = Decrease in original price**  
**(SALE)**      *Subtract*

**Markup = Increase in original price**  
**(Store Profit)**      *Addition*

## Discounts and Markups: Mental Math

60 points decreased by 10%

$$60 * .10 = 6$$

54

8 meters increased by 25%

$$25\% \text{ is } \frac{1}{4}$$

$$\frac{1}{4} \text{ of } 8 = 2$$

10

## Finding the Sale Price

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The original price of the shorts is \$35. What is the sale price?

**Method 1:** First, find the discount. The discount is 25% of \$35.



$$\bullet \quad 0.25 \times 35 = 8.75$$

$$\bullet \quad 35 - 8.75 =$$

$$\$26.25$$

## Finding the Sale Price

**Method 2:** First, find the percent of the original price.



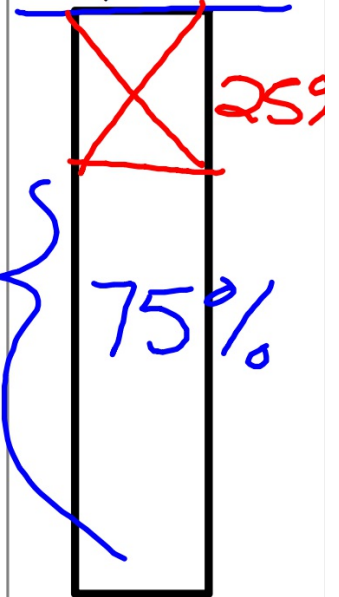
What percent of the original price am I actually paying now?

$$0.75 \times 35$$

$$\$26.25$$

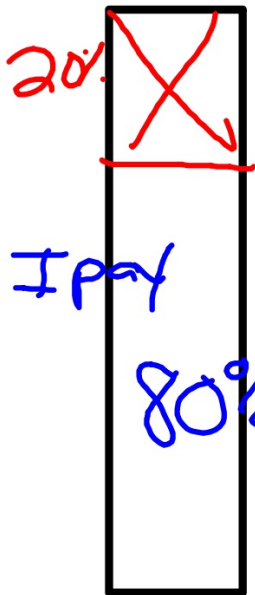
I pay

Total Price  
\$35



## Finding the Sale Price

Original Price	Percent of Discount	Sale Price
\$80	20%	



Think: What Percent Am I really Paying?

•  $80 \times 0.2 = \$16$

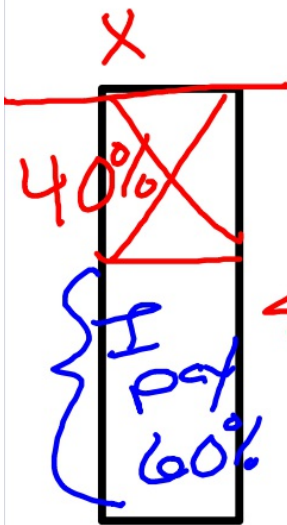
•  $80 - 16 = \$64$

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$80 \times 0.8 = \$64$

## Finding an Original Price

What is the original price of the shoes?



1st: let original Price be  $x$

★ 2nd: Find the % I pay  
 $(100 - \text{Sale \%}) (100 - 40) = 60$

3rd: use this equation

part = % \* Total

Sale price = % from step 2 \*  $x$

$$\frac{33}{0.6} = \frac{0.6}{0.6} x$$

$$x = \$55.00$$

## Finding the Original Price

Original Price	Percent of Discount	Sale Price
?	5%	\$57



Think: The Sale Price is How Much of the Original Price?

$$\text{part} = \% \rightarrow \text{Total}$$

$$\frac{57}{0.95} = \frac{0.95 X}{0.95}$$

$$X = \$60.00$$





## Finding the Percent of Discount

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%  
change

Original Price: \$140

Sale Price: \$119

How much was the Discount? How much did you save?

Change 21

Change ÷ Original price

$$\frac{21}{140} = 0.15 \quad \text{15\%}$$

## Finding the Percent of Discount

Original Price	Percent of Discount	Sale Price
\$49.99		\$34.99

$$\begin{array}{r} 49.99 \\ - 34.99 \\ \hline 15 \end{array}$$

amount of discount = 15

what percent is this discount out of the original price?

$$\frac{15}{49.99} = 0.3000 =$$

30%

## Finding a Selling Price

A store pays \$70 for a bicycle. The percent of markup is 20%. What is the selling price?



$$70 \cdot 0.2 = 14$$

$$70 + 14 = \$84$$

This is just like Adding on the Tax or Tip.

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$$70 * 1.2 = \$84$$

100%  
of  
bike

20% ↑

## Finding a Selling Price

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Cost to store: \$80

Markup: 60%

$$80 * 1.6 = 128.00$$

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$$80 * 0.6 \\ = 48$$

$$80 + 48 = 128.00$$

# Homework

pg. 250

#3-21 odd

#22