

PROBLEM OF THE DAY

A TV has an original price of \$499. Find the new price after the 10% increase.

RECAP OF YESTERDAY...

1. 20% of $100 \rightarrow 0.20 \times 100 = 20$

2. Percent Increase or Decrease:

a. $\text{Amount of Change} = \text{Greater Value} - \text{Lesser Value}$

b. $\text{Percent Change} = \text{Amount of Change} \div \text{Original Amount}$

PERCENT EXPRESSIONS

How can you rewrite expressions to help you solve markup and markdown problems?

CALCULATING MARK-UPS

Markup : A markup is one kind of percent increase.

To make a profit, stores mark up the prices on the items they sell. A sports store buys skateboards from a supplier for s dollars. What is the retail price for skateboards that the manager buys for \$35 and \$56 after a 42% markup?

Retail price = Original cost + Markup

$$= s + 0.42s$$

$$= 1s + 0.42s$$

$$= 1.42s$$

CALCULATING MARK-UPS

Expression $\rightarrow 1.42s$

Use the expression to find the retail price of each skateboard.

$$s = \$35 \rightarrow \text{Retail price} = 1.42(\$35) = \$49.70$$

$$s = \$56 \rightarrow \text{Retail price} = 1.42(\$56) = \$79.52$$

CALCULATING MARK-UPS

Use the original price and the markup to find the retail price.

1. Original price: \$60; Markup: 15%; Retail price?
2. Original price: \$32; Markup: 12.5%; Retail price?

CALCULATING MARK-DOWNS

Mark-down : one kind of percent decrease.

A discount store marks down all of its holiday merchandise by 20% off the regular selling price. Find the discounted price of decorations that regularly sell for \$16 and \$23.

Sale price = Original price - Markdown

$$= p - 0.2p$$

$$= 1p - 0.2p$$

$$= 0.8p$$

CALCULATING MARK-DOWNS

Expression $\rightarrow 0.8p$

Use the expression to find the sale price of each decoration

$$p = \$16 \rightarrow \text{Sale price} = 0.8(\$16) = \$12.80$$

$$p = \$23 \rightarrow \text{Sale price} = 0.8(\$23) = \$18.40$$

CALCULATING MARK-DOWNS

Use the original price and the markup to find the retail price.

1. Original price: \$50; Markdown: 22%; Retail price?
2. Original price: \$125; Markdown: 30%; Retail price?

Item	Price	Markup %	Expression	Retail Price
Hat	\$18	15%		
Book	\$22.50	42%		
Shirt	\$33.75	75%		
Shoes	\$74.99	33%		
Clock	\$48.60	100%		
Painting	\$185.00	125%		