Name: _____ Date: _____

Two Discounts Do Not Make Thirty

Circle group

Maya wants shoes that cost 80 dollars. A sign says 20 percent off. She also has a coupon for 10 percent more off. She adds 20 and 10 and gets 30 percent. She thinks she will pay 56 dollars. At the register, the price is 57 dollars and 60 cents. Why?

A percent is a part of a starting number. The two discounts do not start from the same number. First, 20 percent of 80 dollars is 16 dollars. The shoes now cost 64 dollars. Then the coupon takes 10 percent of 64 dollars. That is 6 dollars and 40 cents. The last price is 57 dollars and 60 cents.

The coupon saved less because 64 is smaller than 80. So two discounts save a little less than the two percents added up.

Work out the price before you buy. Then you will know what to expect.

Questions

1. What price did Maya think she would pay?

_____

_____

2. What was the price after the first discount?

_____

_____

3. How much did the coupon take off?

_____

_____

4. Why did the coupon save only 6 dollars and 40 cents?

_____

_____

5. Why was Maya's guess of 56 dollars wrong?

_____

_____

6. What should a shopper do before buying?

_____

_____

Words to know

discount: an amount taken off the regular price
percent: a part out of one hundred equal parts
coupon: a small ticket that lowers the price of something
register: the place in a store where you pay

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Two Discounts Do Not Make Thirty

Triangle group

A sneaker store hangs a bold sign: 20 percent off all shoes, and an extra 10 percent off with a coupon. Maya wants a pair that costs 80 dollars. She adds the two discounts and expects to save 30 percent, which would bring the price down to 56 dollars. At the register, the total is 57 dollars and 60 cents. Did the store make a mistake?

It did not. A percent is always a part of some starting amount, and these two discounts do not use the same starting amount. The first discount takes 20 percent of 80 dollars, which is 16 dollars, so the shoes drop to 64 dollars. The coupon then takes 10 percent of the new price of 64 dollars, which is 6 dollars and 40 cents. After that is subtracted, the final price is 57 dollars and 60 cents.

The second discount saved less than Maya expected because it was figured on a smaller number. Ten percent of 64 dollars is less than ten percent of 80 dollars. That is why two discounts in a row always save a little less than the two percents added together.

Smart shoppers watch for the words "extra percent off." They often mean the second discount comes after the first one. Before you buy, work out the final price yourself, and you will know what to expect when you reach the register.

Questions

1. What price did Maya expect to pay after adding the discounts?

_____

_____

2. What was the price of the shoes after the first discount?

_____

_____

3. How much money did the coupon take off?

_____

_____

4. Why was the coupon worth only 6 dollars and 40 cents?

_____

_____

5. Why was Maya's guess of 56 dollars wrong?

_____

_____

6. What should a shopper do before buying?

_____

_____

Words to know

discount: an amount taken off the regular price
percent: a part out of one hundred equal parts
coupon: a small ticket that lowers the price of something
register: the place in a store where you pay
subtracted: taken away from a larger amount

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Two Discounts Do Not Make Thirty

Square group

A sneaker store has hung a bold sign announcing 20 percent off every pair of shoes, plus an extra 10 percent off for customers who present a coupon. Maya has her eye on a pair that costs 80 dollars. Reasoning that the two discounts combine, she adds them together and expects to save 30 percent, which would lower the price to 56 dollars. At the register, however, the total comes to 57 dollars and 60 cents. Has the store made a mistake?

It has not. A percent always describes a portion of some starting amount, and these two discounts are not measured from the same starting amount. The first takes 20 percent of 80 dollars, which is 16 dollars, so the shoes fall to 64 dollars. The coupon then removes 10 percent of that new price of 64 dollars, which comes to 6 dollars and 40 cents. Once that has been subtracted, the final price is 57 dollars and 60 cents.

The second discount saved less than Maya anticipated because it was calculated from a smaller number. Ten percent of 64 dollars is less than ten percent of 80 dollars. That explains why two discounts applied one after the other always save a little less than the two percents added together.

Careful shoppers pay attention to the words "extra percent off," which frequently signal that the second discount comes after the first. Before making a purchase, it is wise to calculate the final price yourself, so that nothing at the register comes as a surprise.

Questions

1. What price did Maya expect after adding the two discounts together?

_____

_____

2. What was the price of the shoes once the first discount was taken?

_____

_____

3. How much money did the coupon remove from the price?

_____

_____

4. Why was the coupon worth only 6 dollars and 40 cents?

_____

_____

5. Why was Maya's estimate of 56 dollars mistaken?

_____

_____

6. What does the passage advise a shopper to do before buying?

_____

_____

Words to know

discount: an amount taken off the regular price
percent: a part out of one hundred equal parts
coupon: a small ticket that lowers the price of something
register: the place in a store where you pay
subtracted: taken away from a larger amount

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Two Discounts Do Not Make Thirty

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Two Discounts Do Not Make Thirty

Easier · 126 words · Flesch-Kincaid grade 2

1. 56 dollars.
2. 64 dollars.
3. 6 dollars and 40 cents.
4. It took 10 percent of the lower price, 64 dollars.
5. She added the percents, but the discounts start from different numbers.
6. Work out the price on their own.

Triangle: Two Discounts Do Not Make Thirty

This passage · 213 words · Flesch-Kincaid grade 5.2

1. 56 dollars.
2. 64 dollars.
3. 6 dollars and 40 cents.
4. It was figured on the lower price of 64 dollars, not on 80 dollars.
5. She added the percents, but the two discounts start from different amounts.
6. Work out the final price on their own.

Square: Two Discounts Do Not Make Thirty

Harder · 236 words · Flesch-Kincaid grade 7.6

1. 56 dollars.
2. 64 dollars.
3. 6 dollars and 40 cents.
4. It was calculated from the lower price of 64 dollars, not from 80 dollars.
5. She added the percents even though the two discounts start from different amounts.
6. Calculate the final price personally.