

Name: _____

Grade 9 - Benchmark 1
Constructed Response

Student A

Solve the problem below. Show your work in the box.

Paxolai purchases a video game that costs \$45.00. She uses two coupons when she buys the video game. The first coupon gives 25% off of the price. The second coupon is for \$5.00 off the price of any video game. When the clerk rings up Paxolai's purchase, he takes the \$5.00 off first and then applies the 25% discount.

Would the price that Paxolai paid for the video game have increased, decreased, or stayed the same if the clerk had taken off the 25% discount first and then taken off the \$5.00 coupon?

Answer: Decreased

Explain how you derived your answer.

When the 5 dollars was taken off the price of the video game became 40\$ and then the 25% which made it 30\$ because 25% of 40\$ is 10\$ which would be taken off. 25% of 45\$ is 11.35\$ which makes the price 33.65\$ than 5\$ taken off making the price 28.65\$ and it would be a lot cheaper, also saving 1.35\$.

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Solve the problem below. Show your work in the box.

student B

Paxolai purchases a video game that costs \$45.00. She uses two coupons when she buys the video game. The first coupon gives 25% off of the price. The second coupon is for \$5.00 off the price of any video game. When the clerk rings up Paxolai's purchase, he takes the \$5.00 off first and then applies the 25% discount.

Would the price that Paxolai paid for the video game have increased, decreased, or stayed the same if the clerk had taken off the 25% discount first and then taken off the \$5.00 coupon?

Answer: \$ 18.74

Explain how you derived your answer.

$$\begin{array}{r} \$45.00 \\ \times \quad .25 \\ \hline + 23500 \\ + 90000 \\ \hline 11.2500 \end{array}$$

$$\begin{array}{r} -45.00 \\ - 11.25 \\ \hline 23.74 \\ - 5.00 \\ \hline 18.74 \end{array}$$

18.74

First I multiplied to 45.00 by .25 to get the sales tax. Then I subtracted \$45 by the sales tax which came out to be 23.74. Finally I subtracted the 5.00 coupon to get 18.74.

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Would the price that Paxolai paid for the video game have increased, decreased, or stayed the same if the clerk had taken off the 25% discount first and then taken off the \$5.00 coupon?

Answer: Decreased

student C

Explain how you derived your answer.

①

~~45~~ 30.00

45.00

11.20

33.80

②

$$\begin{array}{r} 11.2 \\ 4 \overline{)45.0} \\ \underline{4} \\ 5 \\ \underline{4} \\ 10 \end{array}$$

28.80

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Solve the problem below. Show your work in the box.

student D

Paxolai purchases a video game that costs \$45.00. She uses two coupons when she buys the video game. The first coupon gives 25% off of the price. The second coupon is for \$5.00 off the price of any video game. When the clerk rings up Paxolai's purchase, he takes the \$5.00 off first and then applies the 25% discount.

Would the price that Paxolai paid for the video game have increased, decreased, or stayed the same if the clerk had taken off the 25% discount first and then taken off the \$5.00 coupon?

Answer: decreased.

Explain how you derived your answer.

45.00
- 5.00

40.00

25% = $\frac{1}{4}$
 $4 \overline{) 40.00} = 10$

40.00
- 10.00

30.00 total.

45.00
- 11.10

33.90
- 5.00 (coupon)

28.90 total.

25% first, then 5\$
 $\frac{25}{100} = \frac{1}{4}$
 $4 \overline{) 45} = 11.1$

If you take the 25% off first, your taking away from the original price so it changes everything.

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Would the price that Paxolai paid for the video game have increased, decreased, or stayed the same if the clerk had taken off the 25% discount first and then taken off the \$5.00 coupon?

Answer: The price would've decreased

Student E

Explain how you derived your answer.

$$\frac{x}{45.00} = \frac{25\%}{100\%}$$
$$\begin{array}{r} 25 \\ 25 \\ \cdot 45 \\ \hline 1125 \\ 100 \\ \hline 1125 \\ 11 \\ \hline 100 \cdot 1125 \\ 100 \\ \hline 125 \\ 100 \\ \hline 25 \end{array}$$

The total price would be \$25.00 with the coupon only, and with the second coupon the total would be \$20.00.

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Would the price that Paxolai paid for the video game have increased, decreased, or stayed the same if the clerk had taken off the 25% discount first and then taken off the \$5.00 coupon?

Answer: decrease

Student F

Explain how you derived your answer.

The first way which was \$45, then when you take off the five dollars you get 40. ($45 - 5 = 40$), then you take off 25%, which gives you \$10. ($40 \div 4$)
The 2nd way which was \$45, then you take off 25%, ($45 \div 4$) you get 11.25, then you take off 5 and you have \$6.25. So it decreases.