Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CFS for top quality work**

* + Problem is annotated for **markups and markdowns**
	+ Tape diagram is drawn and annotated
	+ Problem is solved arithmetically using the tape diagram

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UNIT 5 LESSON 11

**AIM**: SWBAT solve complex problems involving markups and markdowns

**THINK ABOUT IT!**

Target is having a holiday sale and is marking down their entire selection of flat screen TV’s. The listed price of a TV is given at $500 and the sign in front of the TV says that price is ¼ off the listed price. Use a tape diagram to visualize and determine the marked down price of the TV.

Key Point

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| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can be used to visualize and solve complex ratio problems |

**Interaction with New Material:**

Ex.1) Old Navy buys its jeans for a certain amount of money and marks up the price by 1/3 before selling them. This week they offering a sale on jeans and marking down the selling cost by 1/8. How much do the jeans cost after the markdown if Old Navy buys jeans for $24?

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**PARTNER PRACTICE**

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| *Bachelor Level* |

* + - 1. Peter’s Pants Palace advertises the following sale: Shirts are $\frac{1}{2}$ off the original price; pants are $\frac{1}{3}$ off the original price; and shoes are $\frac{1}{4}$ off the original price.

Step A: If a pair of shoes costs $\$40$, what is the sales price?

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Step B: At Peter’s Pants Palace, a pair of pants usually sells for $\$33.00$. What is the sale price of Peter’s pants?

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| *Master Level* |

* + - 1. As part of a marketing plan, some businesses mark up their prices before they advertise a sales event. Some companies use this practice as a way to entice customers into the store without sacrificing their profits. A furniture store wants to host a sales event to improve its profit margin and to reduce its tax liability before its inventory is taxed at the end of the year. How much profit will the business make on the sale of a couch that is marked up by $\frac{1}{3}$ and then sold at a $\frac{1}{5}$-off discount if the original price is $2,400?

**INDEPENDENT PRACTICE**

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| *Bachelor Level* |

1. A motorcycle dealer paid a certain price for a motorcycle and marked it up by $\frac{1}{5}$ of the price he paid. If he bought it for $14,000, how much is he selling it for?

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1. A $1,200 washing machine was discounted $\frac{1}{6}$ off the original price. Circle each statement below that applies to this scenario.

a) The washing machine will be sold for more than $1,200

b) The washing machine will be sold for less than $1,200

c) The washing machine now costs $240

d) The washing machine now costs $960

e) The washing machine now costs $1440

f) You can use the expression 1,200 + $\frac{1}{6}$(1,200) to represent this scenario

g) You can use the expression 1,200 - $\frac{1}{6}$(1,200) to represent this scenario

1. If a store advertised a sale that gave customers a discount of $\frac{1}{4}$ off, what is the fractional part of the original price that the customer will pay? Explain your reasoning.

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| *Master Level* |

1. A used car salesperson was talked into marking down the price of a car by $\frac{1}{12}$. If a person buys the car for $99,999, how much did it cost originally?

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1. Mark bought an electronic tablet on sale for $\frac{1}{4}$ off the original price of $825.00. He also wanted to use a coupon for $\frac{1}{5}$ off the sales price. How much did Mark pay for the tablet?

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| *PhD Level* |

1. DeMarkus says that a store overcharged him on the price of the video game he bought. He thought that the price was marked $\frac{1}{4}$ of the original price, but it was really $\frac{1}{4}$ off the original price. He misread the advertisement. If the original price of the game was $48, what is the difference between the price that DeMarkus thought he should pay and the price that the store charged him?

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7. Write two expressions to represent a markup of *n* on $200.

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EXIT TICKET**

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| Self-assessment | I mastered the learning objective today. | I am almost there.  | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there.  | You need more practice and feedback. |

1. A hand-held digital music player was marked down by $\frac{1}{4}$ of the original price in May.

Step A: If the original price was $124.00, what was it sold for?

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Step B: If the sales price (answer from Step A) was l marked up by ½ in June, what was it sold for in June?

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Step C: What is the difference between the discount price and the price that the store paid for the digital player?

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