|  |  |  |
| --- | --- | --- |
| **Discount and Sale Price** |  |  |

|  |  |  |
| --- | --- | --- |
| Problem: | In a video store, a DVD that sells for $15 is marked "10% off." What is the discount? What is the sale price of the DVD? | http://www.mathgoodies.com/lessons/percent/images/dvd2.gif |
|  | |
| Analysis: | Stores often sell goods for a discounted price. Typically, a store will discount an item by a [percent](javascript:popUpWindow('percent')) of the [original price](javascript:popUpWindow('original_price')). In this problem, an item that originally costs $15 is being discounted by 10%. So "10% off" refers to the rate of discount. To solve this problem, we need a procedure. |

**Procedure:**

1. The rate is usually given as a percent.
2. To find the discount, multiply the rate by the original price.
3. To find the sale price, subtract the discount from original price.

Now that we have a procedure, we can solve the problem above.

|  |  |  |
| --- | --- | --- |
| Problem: | In a video store, a DVD that sells for $15 is marked, "10% off". What is the discount? What is the sale price of the DVD? | http://www.mathgoodies.com/lessons/percent/images/dvd2.gif |
|  |  |
|  |  |
|  |  | |
|  | | |
|  |  | |

|  |
| --- |
| Let's take a look at some more examples of calculating discount and sale price. |

|  |  |  |
| --- | --- | --- |
| Example 1: | In a department store, a $40 dress is marked, "Save 25%." What is the discount? What is the sale price of the dress? | http://www.mathgoodies.com/lessons/percent/images/dress.gif |
|  | |
| Analysis: | The phrase, "Save 25%," refers to the rate. |
|  | The original price of the dress is $40. |
|  | | |
|  |  | |
|  |  | |
|  |  | |
|  | | |
|  |  | |

|  |  |  |
| --- | --- | --- |
| Example 2: | In a grocery store, a $12 case of soda is labeled, "Get a 20% discount." What is the discount? What is the sale price of the case of soda? | http://www.mathgoodies.com/lessons/percent/images/soda.gif |
|  | |
| Analysis: | The phrase, "Get a 20% discount," refers to the rate. |
|  | |
|  |  | |
|  |  | |
|  |  | |
|  | | |
|  |  | |

|  |  |  |
| --- | --- | --- |
| Example 3: | In a candy store, a $5.00 jar of candy is labeled, "50% off." What is the discount? What is the sale price of the jar of candy? | http://www.mathgoodies.com/lessons/percent/images/marbles_jar.gif |
|  | |
| Analysis: | The phrase, "50% off," refers to the rate. |
|  | |
|  |  |
|  |  | |
|  |  | |
|  | | |
|  |  | |

|  |
| --- |
| In Example 3, note that the discount and the sale price are the same amount! Do you know what fraction is equal to 50%? Could you have done this problem using mental math? The phrase, "50% off," is the same as, "1/2 off". So using mental math, you would get that one-half of $5.00 is $2.50. Let's look at another example that uses a fraction. |

|  |  |  |
| --- | --- | --- |
| Example 4: | A pizzeria has a coupon that reads, "Get http://www.mathgoodies.com/lessons/percent/images/1_over_3.gif off a $9.00 cheese pizza." What is the discount? What is the sale price of the cheese pizza? | http://www.mathgoodies.com/lessons/percent/images/pizza.jpg |
|  | |
| Analysis: | The phrase, "http://www.mathgoodies.com/lessons/percent/images/1_over_3.gif off," refers to the rate. It is expressed as a fraction. |
|  | |
|  |  |
|  |  | |
|  |  | |
|  | | |
|  |  | |

|  |
| --- |
| Once again, you could calculate the discount and sale price using mental math. Let's look at another way of calculating the sale price of an item. Below is a modified version of the problem from the top of this page. |

|  |  |  |
| --- | --- | --- |
| Example 5: | In a video store, a DVD that sells for $15 is marked, "10% off." What is the sale price of the DVD? | http://www.mathgoodies.com/lessons/percent/images/dvd2.gif |
|  |  |
|  |  |
|  | | |
|  |  | |