Lesson 9.1
Purchasing a New Vehicle

Chapter 9 Vehicle Transportation
Lesson 9.1 Purchasing a New Vehicle

Goals

Learning Target:

Students will be able to compute the sticker price of a new vehicle.

Essential Question

What is the sticker price of a car? Are sticker prices on the car always final?
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**Computing the Sticker Price** Laws require vehicle manufacturers to **display** a buyer’s guide sticker on a new vehicle’s window that shows the price. The **sticker price** includes three charges.

The **base price**, sometimes referred to as the **manufacturer’s suggested retail price** (MSRP), is the price of the engine, chassis (that is, the vehicle’s frame), and any other standard equipment for a particular model. **Options** are extra equipment for convenience, safety, or appearance, such as a sunroof, air conditioning, and tinted glass, not included in the base price. The **destination charge** is the cost of shipping the vehicle from the factory to the dealer.

Therefore, the sticker price is the total of the base price, options, and destination charge.

\[
\text{Sticker Price} = \text{Base Price} + \text{Options} + \text{Destination Charge}
\]

Some dealers add other charges such as a dealer preparation (“prep”) charge for servicing the vehicle before delivering it to the consumer as well as various other delivery, processing, and handling fees such as a title fee.
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EXAMPE 1

Scott Oliver is shopping for a sports car. See Figure 9.1 for a portion of the sticker for a convertible. What is this vehicle’s sticker price?

<table>
<thead>
<tr>
<th>Zephyr Convertible</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Price</td>
<td>$30,665</td>
</tr>
<tr>
<td>Optional Equipment</td>
<td></td>
</tr>
<tr>
<td>5-Speed Automatic Transmission</td>
<td>665</td>
</tr>
<tr>
<td>Polished Aluminum Wheels</td>
<td>925</td>
</tr>
<tr>
<td>Interior Upgrade</td>
<td>460</td>
</tr>
<tr>
<td>Destination Charge</td>
<td>745</td>
</tr>
</tbody>
</table>

Step 1: Find the options price.

Step 2: Find the sticker price.

Base Price + Options + Destination Charge
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**EXAMPLE 1**

Scott Oliver is shopping for a sports car. See Figure 9.1 for a portion of the sticker for a convertible. What is this vehicle’s sticker price?

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**Step 1:** Find the options price.

\[ \text{Options Price} = 665 + 925 + 460 = 2,050 \text{ options price} \]

**Step 2:** Find the sticker price.

\[ \text{Sticker Price} = \text{Base Price} + \text{Options} + \text{Destination Charge} \]

\[ \text{Sticker Price} = 30,665 + 2,050 + 745 = 33,460 \text{ sticker price} \]
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Find the sticker price. Check your answers in the back of the book.

1. River City Autos has a pickup truck for sale. Its base price is $22,225. Prices for available options are 6-speed transmission, $2,908; cruise control, $240; trailer towing package, $230; and power windows, $738. Its destination charge is $900.

2. Coble Downtown is selling a sport coupe hybrid at a base price of $24,990. Options are the convenience package, $1,300; sunroof, $850; and sunroof wind deflector, $100. Destination charge is $625.
Anna and Luke Shore are purchasing a new sport utility vehicle (SUV) with an MSRP of $25,525.00 including the delivery, processing, and handling fee. The Driver Convenience Package, which includes mounted radio controls and power seats, costs five times the amount of the Appearance Package, which includes body side molding and chrome inserts. The SUV’s total cost is $29,137.41, including a 6.75% sales tax. What is the cost of the Appearance Package and the Driver Convenience Package?

Let \( x = \) Cost of appearance package

Let \( 5x = \) Cost of convenience package

\[
\text{Total Cost} = \text{Base Price} + \text{Destination Charge} + \text{Appearance Pkg.} + \text{Convenience Pkg.} + \text{Tax}
\]
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**EXAMPLE 2** Algebra

Anna and Luke Shore are purchasing a new sport utility vehicle (SUV) with an MSRP of $25,525.00 including the delivery, processing, and handling fee. The Driver Convenience Package, which includes mounted radio controls and power seats, costs five times the amount of the Appearance Package, which includes body side molding and chrome inserts. The SUV’s total cost is $29,137.41, including a 6.75% sales tax. What is the cost of the Appearance Package and the Driver Convenience Package?

Let $x =$ Cost of appearance package

Let $5x =$ Cost of convenience package

\[
\text{Total Cost} = \text{Base Price} + \text{Destination Charge} + \text{Appearance Pkg.} + \text{Convenience Pkg.} + \text{Tax}
\]

\[
$29,137.41 = ($25,525.00 + x + 5x) + 0.0675($25,525.00 + x + 5x)
\]

\[
$29,137.41 = ($25,525.00 + 6x) + 0.0675($25,525.00 + 6x)
\]

\[
$29,137.41 = $25,525.00 + 6x + $1,722.9375 + 0.405x
\]

\[
$29,137.41 = $27,247.9375 + 6.405x
\]

\[
$1,889.4725 = 6.405x
\]

$295 = x

The Appearance Package costs $295.

The Driver Convenience Package costs $295 \times 5 = $1,475.
Complete the problem. Check your answer in the back of the book.

3. Nayan Patel purchases a compact vehicle with an MSRP of $17,980.00, including the destination charge and title fee. He selects a 6-way power front passenger seat, which costs 10 times the amount of remote keyless entry. The total cost of the compact vehicle, including a 7% sales tax, is $19,591.70. Find the cost of the power front passenger seat and the remote keyless entry.
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Assignment

Lesson 9.1 Assignment

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8. Dalton Slade is interested in buying a small pickup with a base price of $31,145. Factory-installed options include folding rear seat, $325; front leather trim split bench seat, $425; sport package, $690; tow package, $650; engine block heater, $85; and optional 4-wheel drive, $950. The destination charge from its assembly plant in Michigan is $852. What is this SUV’s sticker price?

9. Andy Tedesco is interested in buying a small pickup with a base price of $31,100. It has these options: stereo/CD player/navigation system, $1,445; power sunroof, $850; security package, $640; aluminum wheels, $545; tubular side steps, $525; heated front seats, $250; trailer tow group, $525; pearlcoat paint, $225; and all-terrain tires, $100. Its destination charge is $645. Determine its sticker price.

10. Devin and Marlika Randolph are shopping for a new minivan with all-wheel drive. Its base price is $25,535. The options are a touch-screen DVD/TV at $650, satellite navigation system at $225, a heavy-duty engine cooling system at $354, a trailer-tow package at $568, and a keyless entry system at $332. The destination charge is $850. What is the minivan’s sticker price?

11. **ALGEBRA** Betty Richard’s new luxury sedan has a $43,895.60 MSRP including title and processing fees. The navigation system cost twice as much as the upgraded sound system, which included AM/FM stereo with CD/MP3 player, and 9 speakers. Including the 6.5% sales tax, the total cost of her new auto was $48,346.31. Find the cost of the upgraded sound system and the navigation system.