

*Note that Swifty Car Wash has to contribute payroll taxes for **every** employee, according to their pay, not just Dynasti.

- 2. Nolan works part-time at a movie theater making his state's minimum wage of \$10.10 per hour. He receives a paycheck every 2 weeks.**
- a. If he works 20 hours over the course of the first two weeks in February, how much should he expect to have taken out of his paycheck for payroll taxes?

 - b. The second half of February is much busier with local schools closed for the entire week of Presidents Day, and Nolan's boss schedules him for 27 hours instead. Other than payroll taxes, Nolan doesn't have any other money withheld from his paycheck. How much can he expect his take-home pay to be? Note: Take-home pay is gross earnings minus any deductions.

Payroll taxes are shared by traditional employees and their employers. Alternatively, if you are self-employed, which includes gig workers or those with a side-hustle, you have to pay the employer's portion as well as the employee's portion. These taxes are then called Self-Employment Contributions Act (SECA) taxes, which are taxed at the rates shown below.

| Tax | Total |
|-----------------|--------------|
| Social Security | 12.4% |
| Medicare | 2.9% |
| Total | 15.3% |

In addition to full-time job at Swifty Car Wash, Dynasti also has a side-gig selling elaborate, expensive birthday cakes to customers within a 50-mile radius of her home. She's using her profits to pay down law school loans more quickly.

- 3. In June, one of her busiest months, Dynasti sells 7 cakes, collecting a total of \$795 from her customers. How much does she need to pay for her SECA taxes?**
-
-
-
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-
- 4. After reading more about self-employment taxes, Dynasti realizes she can deduct the cost of the ingredients she used to bake the cakes before she determines how much tax she owes! If ingredients for those 7 cakes cost a total of \$82, how much does Dynasti actually owe for SECA?**

Level 2

Unlike payroll, income, and self-employment taxes which are based on income, sales tax is based on the cost of goods purchased. The US does not have a universal federal sales tax; instead, individual states (and sometimes local governments) make the rules regarding sales tax in their jurisdictions. Not only do they set the rates, but they also set policy on what types of items are taxed and which are tax exempt.

In the state of MA the state sales tax is 6.25%, there are no local sales taxes in the state, and the following categories are tax-exempt (no sales tax charged): Food for human consumption (non-restaurant), clothing under \$175, periodicals, and admissions/tickets.¹

¹ [Sales Tax Institute - MA](#)

Glenn is doing some holiday shopping at his local retail superstore, and he picks up some general items for home, too. Here is his receipt:

| | |
|---|-----------|
| All-You-Need Supercenter 123 Pasta Way, Somecity, MA 98067 (555) 555-5555 12/05/2021 06:45PM | |
| Register #14 // Receipt #4262827181114 | |
|  | |
| APPAREL | |
| 013034922 T-shirt, Graphic | \$5.00 |
| 012000432 Toddler Girls 2pc | \$9.80 |
| 014421611 Pants, x2 | \$10.00 |
| 013024491 Cardigan, Button | \$17.80 |
| ELECTRONICS | |
| 14699961 Headph wireless | \$99.55 |
| GROCERY | |
| 24462171 Chs, Cheddar, 6oz | \$2.99 |
| 16182461 Apples, 2lbs | \$4.99 |
| 22273126 Cheeznips, 16oz | \$3.49 |
| 17299941 Deli ham | \$6.15 |
| OFFICE | |
| 06222419 Giftwrap Cats | \$4.00 |
| 06222402 Giftwrap Star | \$4.00 |
| 06222439 Giftwrap Bow | \$4.00 |
| 06493114 Tape, 3pk | \$5.99 |
| TOYS | |
| 09727171 FunnyPetz, x2 | \$12.98 |
| 74181117 Bd game, Guess Wha | \$6.00 |
| 91412276 Tricycle, Purple | \$59.00 |
| Subtotal | \$255.74 |
| MA Tax 6.25000 | \$ |
| Total | \$ |
| VISA 1234 | Sale |

- 1. How much should Glenn's receipt list in the MA Tax line?**

- 2. What will Glenn's total bill be as a result of adding the appropriate sales tax?**

- 3. What percent of Glenn's total bill is sales tax?**

- 4. In 2019, the median household income for Massachusetts was \$85,843 per year², which amounts to \$7,154 per month, or \$3577 per paycheck if paid twice per month. If Glenn's family has the median household income, what percent of his recent paycheck went toward sales tax on this purchase?**

- 5. While the median income is nearly \$90,000, a very large percent of MA households actually make closer to \$35,000 per year, which amounts to \$1458 per pay period. If that were Glenn's recent paycheck, what percent of his pay would go to paying sales tax for this trip to All-You-Need?**

- 6. While income taxes scale differently based on how much you earn, sales tax rates are charged to consumers regardless of how much income their household has. Explain how this sales tax system impacts the personal finances of households differently.**

²[DataUSA - MA](#)

Level 3

Five states in the country (Alaska, Delaware, Montana, New Hampshire, and Oregon) do not charge any sales tax on purchases, which means that residents of these states will pay less at the checkout counter than consumers will in other states. For these problems, you'll need the following information:

| Person | Lives in... | Where the state sales tax is... | And local sales taxes are... |
|--------|-----------------|---------------------------------|---|
| Dustin | Dover, DE | 0% | 0% |
| Nina | Edison, NJ | 6.625% | 0% |
| Moses | Kansas City, MO | 4.225% | County: 1.25% City: 3.25% Special: 0.125% |

Dustin buys a \$325 lawn mower in Delaware. His cousin Nina buys the same model in New Jersey, where sales tax is 6.625%³, calculated and then added onto the total cost of the item.

1. What will Nina's total bill for the lawnmower be?
2. They've got a third cousin, Moses, who lives in Kansas City, Missouri. There, he'll expect to pay a 4.225% state sales tax, a 1.25% county sales tax, a 3.25% city sales tax, and a 0.125% special sales tax.⁴ How much will he spend buying the lawnmower at his local hardware store?
3. Moses gets the idea that he should drive up to Delaware to buy the lawnmower there instead, so that he can save all the tax money! BUT, he realizes he'll need to pay for roundtrip gas between his hometown in Kansas City, MO and Dustin's hometown in Dover, DE, 1142 miles away. His vehicle gets roughly 23 miles per gallon on the highway, and a gallon of gas is currently \$3.30. Is driving to Delaware for the lawnmower worthwhile? Show your work.

³ [Sales Tax Institute](#)

⁴ [Sales Tax Handbook - MO](#)

