

Applications

They take the money out of your paycheck before you can go out and spend it.

—Robert Hopkins, financial advisor

TEACH

Exercises 2, 3, and 5

These exercises assess students' knowledge of pay periods and the pay stub data. It is important that students complete either (or both) of the first two exercises before attempting the algebraic representations in Exercise 5.

ANSWERS

1. The intent of Hopkins's quote was to make a point about direct withdrawals into savings and retirement accounts. However, it applies to the multitude of deductions discussed in this lesson. Money is taken out of your paycheck and sent to the appropriate governmental agencies and/or banks before you have a chance to spend it.

- How can the quote be interpreted in light of what you have learned in this section?
- Joe makes an hourly wage of \$14.10. For hours worked over 40, he is paid at a rate of \$21.15 per hour. Last week, Joe worked 45 hours.
 - What is Joe's gross pay for this pay period? **\$669.75**
 - What is Joe's Social Security deduction? **\$41.52**
 - What is Joe's Medicare tax deduction? **\$9.71**
 - Joe's other deductions are: federal tax \$61.12, state tax \$21.03, city tax \$6.01, retirement insurance \$4.12, disability insurance \$1.31, medical insurance \$13.05, and dental insurance \$5.46. What are Joe's total deductions for this pay period? **\$163.33**
 - What is Joe's net pay for this pay period? **\$506.42**
 - If Joe pays the same amount for medical insurance each weekly pay period, what is his annual premium? **\$678.60**
 - Does Joe receive time-and-a-half, double time, or triple time for each hour of overtime? **time-and-a-half**
- Leslie works for Blanck Corporation. His annual salary is \$57,285.50.
 - What is Leslie's annual Social Security deduction? **\$3,551.70**
 - What is Leslie's annual Medicare deduction? **\$830.64**
 - Leslie is paid every other week. What is his biweekly gross pay? **\$2,203.29**
 - Each pay period, Leslie's employer deducts \$418.63 for federal income tax. What percentage of Leslie's yearly salary is withheld for federal income tax? **Approx. 39%**
 - If Leslie is taxed at an annual rate of 3.65% for city tax, how much is deducted from his salary per paycheck for city tax? **\$80.42**
 - Leslie's net pay for each pay period is \$1,347.34. What percent of his biweekly gross pay is deducted from his salary to yield this net pay amount? **Approx. 39%**
 - As of January 1, Leslie will receive a 12.5% raise. What will Leslie's new annual salary be? **\$64,446.19**
 - If the percentage of his biweekly deductions remains the same, what should Leslie's new net pay be for each pay period? **\$1,512.01**

1545-0008		Safe, accurate, FAST! Use IRS e-file		Visit the IRS website at www.irs.gov/efile .	
1	Wages, tips, other compensation	2	Federal income tax withheld		
3	Social security wages	4	Social security tax withheld		
5	Medicare wages and tips \$73,094.00	6	Medicare tax withheld		
7	Social security tips	8	Allocated tips		
9	Advance EIC payment	10	Dependent care benefits		
11	Nonqualified plans	12a	See instructions for box 12 E \$1,900.00		
13	Statutory employee <input type="checkbox"/> Retirement plan <input type="checkbox"/> Third-party sick pay <input type="checkbox"/>	12b			
14	Other caf125 \$4,500.00	12c			
		12d			
Income tax	18 Local wages, tips, etc.	19 Local income tax	20 Locality name		

4. Use the partial information given in Leslie's electronic W-2 form (see question 3) to calculate the amount in Box 1. **\$66,694.00**
5. Let A represent the number of the paycheck for the year. For example, if the paycheck was the fifth of the year, A is 5. Let B represent the biweekly gross pay. Let C represent the biweekly union dues contribution. Let D represent the biweekly health insurance deduction. Let E represent the biweekly retirement plan contribution.
- Write an expression for the calendar year-to-date gross pay. **AB**
 - Write an expression for the pay period Social Security tax. **$0.062B$**
 - Write an expression for the calendar year-to-date Social Security tax (assume that the maximum will not be met). **$0.062AB$**
 - Write an expression for the pay period Medicare tax. **$0.0145B$**
 - Write an expression for the calendar year-to-date Medicare tax. **$0.0145AB$**
 - Write an expression for the calendar year-to-date union dues. **AC**
 - Write an expression for the calendar year-to-date health insurance deduction. **AD**
 - Write an expression for the calendar year-to-date retirement plan deduction. **AE**
 - Assume that the taxpayer pays 21% federal taxes. Write an expression for the federal tax withholding per pay period. **$0.21B$**
 - Assume that the taxpayer pays 11% state taxes. Write an expression for the state tax withholding per pay period. **$0.11B$**
 - Write an algebraic expression that represents the net pay for this pay period. **$B - 0.062B - 0.0145B - C - D - E - 0.21B - 0.11B$**

6. Complete the missing entries in the following pay stub.
- As indicated in the paycheck number box, this is the 18th paycheck of the year. Determine the current gross pay. **\$1,195**
 - What is the Social Security tax for this pay period? **\$74.09**
 - What is the year-to-date Social Security tax?
 - What is the Medicare tax for this pay period?
 - What is the year-to-date Medicare tax? **\$311.94**
 - What are the union dues for this pay period if it is paid weekly? **\$12**
 - What is the year-to-date health insurance contribution if it is paid weekly? **\$431.10**
 - What is the state tax rate? **16%**
 - What is the federal tax rate? **27%**

7. Andres is taxed at a 17% tax rate for his federal taxes. Last year, he reduced his taxable income by contributing \$350 per biweekly paycheck to his tax-deferred retirement account and \$50 per biweekly paycheck to his FSA. By how much did he reduce his annual federal taxes if his gross biweekly pay is \$1,870? **\$1,768**


8. Examine this portion of a taxpayer's W-2 form. Assume that the taxpayer's wages for the year are under the Social Security limit. What entry should be in Box 1? **\$77,255.00**

Exercise 6
An incorrect answer at the beginning of this exercise can cause subsequent responses to also be incorrect. Make sure that students double-check their work for accuracy before moving on to the next part of this problem.

Exercises 7, 12, and 13
These exercises offer students different scenarios in which taxable income is reduced by tax-deferred withholdings. Make sure that students fully understand what is being asked before attempting each problem.


Exercises 8-11
Point out to students that the W-2 forms shown in these exercises are just a portion of a complete form. These partial W-2 forms are shown this way to save space in the textbook.

EARNINGS		
PERIOD	AMOUNT	YTD AMOUNT
WEEKLY - #18	a.	\$21,510
DEDUCTIONS		
TAX TYPE	AMOUNT	YTD AMOUNT
Social Security	b.	c.
Medicare	d.	e.
Federal Tax	\$322.65	\$5,807.70
State Tax	\$191.20	\$3,441.60
ADJUSTMENTS		
ITEM	AMOUNT	YTD AMOUNT
Union Dues	f.	\$216.00
Family Health Ins.	\$23.95	g.


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1 Wages, tips, other compensation	2 Federal income tax withheld
3 Social security wages	4 Social security tax withheld \$4,789.81
5 Medicare wages and tips	6 Medicare tax withheld
7 Social security tips	8 Allocated tips
9 Advance EIC payment	10 Dependent care benefits

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9. Let the Medicare tax withheld in Box 6 be represented by x as shown. Write an algebraic expression that represents the federal income tax withheld assuming that the taxpayer pays 28% of his income in federal taxes and that there are no tax-deferred entries for the year. $0.28\left(\frac{x}{0.0145}\right)$

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1 Wages, tips, other compensation	2 Federal income tax withheld
3 Social security wages	4 Social security tax withheld
5 Medicare wages and tips	6 Medicare tax withheld x
7 Social security tips	8 Allocated tips
9 Advance EIC payment	10 Dependent care benefits

10. Determine the correct entry for Box 4. **\$5,758.56**

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1 Wages, tips, other compensation	2 Federal income tax withheld
3 Social security wages	4 Social security tax withheld
5 Medicare wages and tips	6 Medicare tax withheld \$1,346.76
7 Social security tips	8 Allocated tips
9 Advance EIC payment	10 Dependent care benefits

11. Determine the correct entry for Box 1 assuming that the taxpayer pays 33% of his total income in federal taxes. **\$121,900**

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1 Wages, tips, other compensation	2 Federal income tax withheld \$40,227.00
3 Social security wages	4 Social security tax withheld
5 Medicare wages and tips	6 Medicare tax withheld
7 Social security tips	8 Allocated tips
9 Advance EIC payment	10 Dependent care benefits

12. Martina is taxed at a rate of 25% for her federal taxes. Last year, she reduced her taxable income by contributing to a flexible savings plan in the amount of \$2,700. If her wages before the deduction were \$68,000, how much did she save in federal taxes by using the FSA? **\$675**
13. Laurel's W-2 form reported total Medicare wages as \$100,750. She contributed \$30 per weekly paycheck to her FSA and \$75 per weekly paycheck to her retirement plan. She received a 1099 form from her bank for her savings account interest in the amount of \$690 and a 1099 form from an employer that she did some consulting work for in the amount of \$2,600. What is Laurel's taxable income? **\$98,580**