

Hospitality Bridge Curriculum

Math Resources

Outcome #1

Measuring Equipment

Equipment	Size/Amount to Measure	Dry or Wet Ingredients	Measuring – General Notes

Questions to Answer

1. Share one way to measure peanut butter.

2. Share one way to measure butter.

3. How do you measure flour?

4. How do you measure oil?

5. How do you measure nuts?

6. Is it okay to use dry measuring cups to measure liquid ingredients? Why or why not?

Outcome #2

Cooking Measurement Abbreviations

[illegible]

Outcome #2

Cooking Measurements Abbreviations Fill-in-the-Blank

Directions: Write the correct word next to its abbreviation. Refer to the word bank at the bottom if you need help.

1. **lb** _____
2. **°F** _____
3. **pt** _____
4. **pkg** _____
5. **tsp** _____
6. **oz** _____
7. **gal** _____
8. **°C** _____
9. **fl oz** _____
10. **qt** _____
11. **c** _____
12. **Tbsp** _____

cup	ounce	Degrees	Fahrenheit	gallon	pound	tablespoon	
fluid	ounce	pint	quart	Degrees	Celsius	teaspoon	package

Outcome #2

How to Scale Recipes: Doubling and Halving Guide

The fundamental principle of recipe scaling is simple: **multiply or divide all ingredients by the same factor**. If you're doubling a recipe (going from 4 to 8 servings), double everything. If you're halving it (going from 6 to 3 servings), cut everything in half.

Example: Doubling a Recipe

Original recipe serves 4:

- 2 cups flour → 4 cups flour
- 1 cup sugar → 2 cups sugar
- 2 eggs → 4 eggs
- 1/2 cup butter → 1 cup butter

The conversion factor is 2 ($8 \text{ servings} \div 4 \text{ servings} = 2$).

Example: Halving a Recipe

Original recipe serves 6:

- 3 cups flour → 1.5 cups flour
- 1.5 cups sugar → 0.75 cups sugar
- 3 eggs → 1.5 eggs (round to 2 for practicality)
- 1 cup milk → 0.5 cups milk

The conversion factor is 0.5 ($3 \text{ servings} \div 6 \text{ servings} = 0.5$).

*Excerpt from Scaling Recipes: Doubling and Halving Recipes, Formula Forge.org,
<https://www.formulaforge.org/cooking/scale-recipes-guide>, accessed on 3/30/26.*

Outcome #2

Up Scaling Practice – Cheddar Cheese Soup

Recipe	Upscale – 8 servings	Upscale – 12 servings	Upscale – 16 servings
*Cheddar Cheese Soup 2 tbsps butter or margarine ¼ c chopped onion ½ c chopped celery 2 tbsp all-purpose flour ¼ tsp pepper ¼ tsp ground mustard (dry) 1 c milk 10 ½ oz. condensed chicken broth 2 c shredded Cheddar cheese Yields 4 servings *Betty Crocker's New Cookbook, Macmillan, 1996, p. 377.			

Outcome #2

Scale Up the Recipe (blueberry cobbler)

Directions: Scale up the recipe to increase the serving size. Write the entire recipe with correct upscaling in each column.

Original Recipe	Scale Up 12	Scale Up 18	Scale Up 24
*Blueberry Cobbler ½ c sugar 1 tbs cornstarch ¼ tsp ground cinnamon 4 cups of blueberries 1 tsp lemon juice 3 tbs shortening 1 c all-purpose flour 1 tbs sugar 1 ½ tsp baking powder ½ tsp salt ½ c milk Yields 6 servings *Betty Crocker's New Cookbook, Macmillan, 1996, p. 139			

Outcome #2

Scale Up the Recipe (banana bread)

Directions: Scale up the recipe to increase the serving size. Write the entire recipe with correct upscaling in each column.

Original Recipe	Scale Up 4	Scale Up 8	Scale Up 12
*Banana Bread 1 ¼ cups of sugar ½ c stick butter or margarine 2 large eggs 1 1/2 cups mashed bananas ½ c buttermilk 1 tsp vanilla 2 ½ cups of all-purpose flour 1 tsp baking soda 1 tsp salt 1 c chopped nuts Makes 2 loaves <u>*Betty Crocker's New Cookbook</u>, Macmillan, 1996, p. 43			

Outcome #2

Scale Up the Recipe (Breakfast Casserole)

Directions: Scale up the recipe to increase the serving size. Write the entire recipe with correct upscaling in each column.

Original Recipe	Scale Up 4	Scale Up 8	Scale Up 12
Breakfast Casserole 6 slices of bread cubed 6 eggs 1 pound of cooked meat (ham or sausage) 8 oz. shredded cheddar cheese 2 c. of milk ½ tsp. dry mustard ½ tsp. salt ¼ tsp. pepper			

Outcome #3

Pay Stub Vocabulary

Vocabulary Word	Definition
Employee	
Pay Period	
Period Beginning	
Pay Ending	
Pay Date	
Hours (worked)	
Rate of Pay	
Regular Pay	
Overtime (OT)	
Overtime Pay	
Gross Pay	

Net Pay (Take Home Pay)	
Year to Date (YTD)	
Benefits	
Paid Vacation Days	
Paid Sick Days	
Deductions	
Federal Income Tax	
State Income Tax	
Medicare	
Health Insurance	
Social Security	
401 (k)	



Outcome #

EMPLOYEE

Oliver Foster
123 W. Front St.
Boise, ID 83702

PAY PERIOD

Period Beginning: 3/19/2020
Period Ending: 3/25/2020
Pay Date: 3/27/2020
Total Hours: 20.00

BENEFITS	Used	Available
Sick	5.0	90.00
Vacation	5.0	99.00

NET PAY: \$428.08

MEMO:

PAY	Hours	Rate	Current	YTD
Regular Pay	5.00	25.00	125.00	125.00
CA Meal Break	5.00	50.00	250.00	250.00
Sick Pay	5.00	25.00	125.00	125.00
Vacation Pay	5.00	25.00	125.00	125.00

DEDUCTIONS	Current	YTD
Taxable Medical Ins	10.00	10.00
Pre tax Medical	62.50	62.50

TAXES	Current	YTD
Federal Income Tax	54.93	54.93
Social Security	34.88	34.88
Medicare	8.16	8.16
ID Income Tax	26.45	26.45

SUMMARY	Current	YTD
Total Pay	\$625.00	\$625.00
Taxes	\$124.42	\$124.42
Deductions	\$72.50	\$72.50

NET PAY: \$428.08

Employee ID
XXXXXXXXXX

Check Date
12/31/2021

Period Start
12/16/2021

Period End
12/31/2021

Check No.

B

Federal Tax - Status SS - Allowances

State Tax - Status NONE - Allowances NONE

Current Earnings Detail				
DATE	DESCRIPTION	RATE	HOURS	AMOUNT
12/31/2021	Regular	32.4507	86.67	2812.50
12/31/2021	EXP REI	248.49	1.00	248.49
TOTAL(s)			87.67	3,060.99

Deductions / Taxes		
DESCRIPTION	AMOUNT	Y-T-D
Medical	15.39	123.12
Federal Income	254.89	229.98
FICA-Medicare	40.56	476.92
FICA - OASOI	173.42	2039.26

DIRECT DEPOSIT			Net Pay
Type	Account	Amount	\$2,576.73
Checking	XXXXXXXX	2,576.73	
Total:			Net Pay YTD
			\$28,686.61

Total(s):	484.26	5,919.28
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Y-T-D EARNINGS	
DESCRIPTION	AMOUNT
Regular	30937.50
Retro Pay	2026.86
EXP REI	1591.54

PAID TIME OFF	
DESCRIPTION	AMOUNT

EMPLOYER CONTRIBUTIONS		
DESCRIPTION	AMOUNT	Y-T-D
XXXXX	4.33	50.56
XXXXX	13.41	134.10
XXXXX	10.41	104.10
XXXXX	2.01	20.10
XXXXX	2.86	28.60
XXXXX	250.00	2000.00

Total:	\$34,605.89
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Total:	\$288.02	2,387.46
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Outcome #3

Pay Stub Questions

Review the two pay stubs (A and B). Answer the questions below for each pay stub.

Pay Stub A

1. What is the pay period?
2. How many hours did the employee work in this pay period?
3. What benefits does the employee receive from the company?
4. What is the employee's gross pay?
5. List the employee's deductions/taxes.
6. What is the total amount of the employee's deductions?
 - a. Current
 - b. YTD
7. Did the employee use any sick time or vacation time during this pay period? If so, how much was used?
 - a. Sick time
 - b. Vacation time
8. What is the employee's net pay?

Pay Stub B

1. What is the pay period?
2. How many hours did the employee work in this pay period?
3. What benefits does the employee receive from the company?
4. What is the employee's gross pay?
5. List the employee's deductions/taxes.
6. What is the total amount of the employee's deductions?
 - a. Current
 - b. YTD
7. Did the employee use any sick time or vacation time during this pay period? If so how much was used?
 - a. Sick time
 - b. Vacation time
8. What is the employee's net pay?

Outcome #3

Your Pay Stub

Answer the following questions using your most recent pay stub.

1. What is the name of your company?
2. What is the pay period
3. How many hours did you work during this pay period?
4. Did you work overtime hours? How many hours?
5. List your deductions and taxes.

Outcome #4

Calculating Overtime

Many workers receive extra payment when they work more than their regular hours. This additional payment is called overtime pay. Understanding how to calculate overtime is important for both employees and employers because it helps ensure fair compensation for extra work.

In the United States, the Fair Labor Standards Act requires employers to pay overtime to most workers. According to this law, overtime pay must be at least one and a half times the regular hourly rate. People often call this "time and a half." For example, if someone earns \$12 per hour normally, their overtime rate would be \$18 per hour.

Most employees qualify for overtime pay when they work more than 40 hours in a single week. However, some workers are exempt from overtime rules. These include certain managers, professionals, and administrative employees who meet specific requirements.

Some companies offer double time for holidays or special circumstances, which means workers receive twice their regular hourly rate. Other employers might have different overtime policies that provide more generous compensation than the legal minimum.

It's essential for workers to keep accurate records of their hours. They should track when they start work, take breaks, and finish each day. This documentation helps ensure they receive correct payment. If employees believe their overtime pay is incorrect, they should discuss the issue with their supervisor or the human resources department.

Understanding overtime calculations helps workers verify that they're receiving fair compensation for their hard work and dedication.

Outcome #4

Overtime Pay – Comprehension Exercises

Read the passage about overtime pay. Then complete the exercises below.

VOCABULARY MATCHING

Match each word with its correct meaning.

- | | |
|------------------|---|
| 1. Overtime | _____ a) Not required to follow overtime rules |
| 2. Exempt | _____ b) Payment that is double the normal rate |
| 3. Double time | _____ c) Extra hours worked beyond regular time |
| 4. Compensation | _____ d) Payment received for work |
| 5. Documentation | _____ e) Written records or proof |

MULTIPLE CHOICE

Choose the correct answer.

1. What is overtime pay?

- a) Payment for holiday work only
- b) Extra payment for working more than regular hours
- c) A bonus given yearly
- d) Payment for weekend work

2. According to U.S. law, overtime pay must be at least:

- a) The same as the regular pay
- b) Double the regular pay
- c) One and a half times the regular pay
- d) Three times the regular pay

3. If an employee earns \$12 per hour, how much is their overtime rate?

- a) \$14
- b) \$16
- c) \$18

d) \$24

4. When do most employees qualify for overtime pay?

- a) After working 8 hours in one day
- b) After working 35 hours in a week
- c) After working 40 hours in a week
- d) After working on holidays

5. Which group may be exempt from overtime rules?

- a) Part-time workers
- b) Hourly workers
- c) Managers and certain professionals
- d) New employees

TRUE OR FALSE

Write True or False for each statement.

- 1. Overtime pay is required by law for all workers. _____
- 2. "Time and a half" means 1.5 times the regular hourly rate. _____
- 3. Some companies offer double time for special occasions. _____
- 4. Workers do not need to keep track of their own hours. _____
- 5. Employees should speak to a supervisor if they believe their overtime pay is incorrect. _____

SHORT ANSWER

Answer each question in complete sentences.

1. Why is it important to understand how overtime pay is calculated?

2. What is the Fair Labor Standards Act responsible for?

3. Name one type of worker who might be exempt from overtime pay.

4. What does “double time” mean?

5. Why should employees keep accurate records of their work hours?

WHAT DO YOU THINK?

Answer in 2–3 complete sentences.

1. Why do you think some workers are exempt from overtime pay?

2. How can keeping accurate time records protect workers?

Outcome #4

Overtime Pay – Comprehension Exercises Answer Key

VOCABULARY MATCHING

1. Overtime – c) Extra hours worked beyond regular time
2. Exempt – a) Not required to follow overtime rules
3. Double time – b) Payment that is double the normal rate
4. Compensation – d) Payment received for work
5. Documentation – e) Written records or proof

MULTIPLE CHOICE

1. b) Extra payment for working more than regular hours
2. c) One and a half times the regular pay
3. c) \$18
4. c) After working 40 hours in a week
5. c) Managers and certain professionals

TRUE OR FALSE

1. False
2. True
3. True
4. False
5. True

SHORT ANSWER (Sample Answers)

1. It helps ensure workers are paid fairly for extra hours worked.
2. It requires employers to follow minimum wage and overtime pay laws.
3. Managers, professionals, or administrative employees.
4. It means being paid twice the regular hourly rate.
5. Accurate records help ensure correct payment and resolve disputes.

CRITICAL THINKING (Sample Responses)

1. Some workers are exempt because their jobs involve decision-making or salaried responsibilities that do not fit hourly pay models.
2. Keeping accurate records protects workers by providing proof of hours worked if there is a pay dispute.

Outcome #4

Overtime Calculations (First Worksheet)

Read each problem slowly. Use the steps to help you solve each problem.

Helpful reminders:

- Regular work week = 40 hours
 - Overtime = hours over 40
 - Time and a half = regular pay $\times$ 1.5
-

Scenario 1

Ana works in a grocery store. She earns \$12 per hour.
Last week, Ana worked 44 hours.
She is paid time and a half for overtime.

Steps:

1. How many hours did Ana work over 40?
2. What is Ana's overtime pay rate?
3. How much overtime pay did Ana earn?

Overtime hours: _____

Overtime pay rate: _____

Overtime pay earned: _____

Scenario 2

Ben works as a cleaner. He makes \$14 per hour.
This week, Ben worked 42 hours.
Overtime pay starts after 40 hours.

Steps:

1. Find the overtime hours.

2. Multiply the pay rate by 1.5.
3. Multiply overtime hours by the overtime rate.

Overtime hours: _____

Overtime pay rate: _____

Overtime pay earned: _____

Scenario 3

Lina works in an office. She earns \$16 per hour.

One week, Lina worked 45 hours.

She earns time and a half for overtime.

Steps:

1. Subtract 40 from total hours worked.
2. Calculate the overtime rate.
3. Calculate total overtime pay.

Overtime hours: _____

Overtime pay rate: _____

Overtime pay earned: _____

Scenario 4

Mark works in a hotel. He earns \$18 per hour.

Last week, Mark worked 46 hours.

Overtime pay is 1.5 times regular pay.

Steps:

1. How many overtime hours did Mark work?
2. How much is his overtime rate?
3. How much overtime pay did he earn?

Overtime hours: _____

Overtime pay rate: _____

Overtime pay earned: _____

Scenario 5

Sara works in food service. She earns \$10 per hour.

She worked 41 hours last week.

She earns overtime after 40 hours.

Steps:

1. Find the overtime hours.
2. Find the overtime pay rate.
3. Find the overtime pay.

Overtime hours: _____

Overtime pay rate: _____

Overtime pay earned: _____

Outcome #4

Overtime Calculations - Worksheet 2

Scenario 1 — Weekly Overtime

Employee: Jamal

Hourly Rate: \$20/hr

Overtime Rate: 1.5×

Hours Worked:

Mon 8, Tue 9, Wed 10, Thu 8, Fri 7

Total hours: 42 (2 OT hours)

Question: How much overtime pay does Jamal earn this week?

- A. \$30
- B. \$40
- C. \$60
- D. \$90

Scenario 2 — Daily Overtime

Employee: Maria

Hourly Rate: \$18/hr

Overtime Rate: 1.5×

Hours Worked:

Mon 9, Tue 8, Wed 10, Thu 7, Fri 8

Question: How many overtime hours did Maria work this week?

- A. 2 hours
- B. 3 hours
- C. 4 hours
- D. 5 hours

Scenario 3 — Double Shift

Employee: Alex

Hourly Rate: \$22/hr

Overtime Rate: 1.5×

Alex works 14 hours in one day. Only first 8 hours are regular.

Question: What is Alex's total daily pay?

- A. \$330
- B. \$352
- C. \$374
- D. \$396

Scenario 4 — Weekend Overtime

Employee: Lily

Hourly Rate: \$16/hr

Weekend OT Rate: 1.5×

Weekday hours: 35

Saturday: 6 hours (all OT)

Question: How much overtime pay does Lily earn?

- A. \$96
- B. \$120
- C. \$144
- D. \$160

Scenario 5 — Holiday Double-Time

Employee: Sam

Hourly Rate: \$25/hr

Holiday Rate: 2×

Holiday shift: 8 hours

Question: How much does Sam earn for working the holiday?

- A. \$200
- B. \$300
- C. \$350
- D. \$400

Overtime Calculations - Worksheet 2

Answer Key

1. C. \$60
2. B. 3 hours
3. C. \$374
4. C. \$144
5. D. \$400

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Outcome #4

Calculating Overtime (Worksheet 3)

Read each scenario carefully. Answer each question.

Scenario 1:

Maria earns \$15 per hour at her job. Last week, she worked 48 hours. Her employer pays time and a half for all hours worked over 40.

Questions:

1. How many overtime hours did Maria work? _____
2. What is Maria's overtime pay rate? _____
3. How much overtime pay did she earn? _____

Scenario 2:

Samuel works as a maintenance technician and earns \$18 per hour. During a busy week, he worked 43 hours. Overtime is paid at 1.5 times the regular rate.

Questions:

1. How many hours qualify as overtime? _____
2. What is Samuel's overtime hourly rate? _____
3. What is his total overtime pay for the week? _____

Scenario 3:

Denise earns \$20 per hour at her office job. One week, she worked 52 hours due to an important project. Overtime pay applies to all hours worked beyond 40.

Questions:

1. How many overtime hours did Denise work? _____

2. What is her overtime rate? _____
3. How much did she earn in overtime pay? _____

Scenario 4:

Carlos works in retail and earns \$14 per hour. He worked 46 hours in one week. His company pays overtime at time and a half.

Questions:

1. How many overtime hours did Carlos work? _____
2. What is his overtime pay rate? _____
3. How much overtime pay should Carlos receive? _____

Scenario 5:

Alyssa earns \$22 per hour as a technical assistant. Last week, she worked 41 hours. Overtime pay is calculated at 1.5 times her regular hourly wage.

Questions:

1. How many overtime hours did Alyssa work? _____
2. What is Alyssa's overtime rate? _____
3. How much overtime pay did she earn? _____

Outcome #4

Calculating Overtime - Different Situations (Worksheet 4)

Read each situation carefully. Follow the instructions for each type of overtime. You may be asked to support your answers, so show your work.

BASIC OVERTIME (More than 40 hours in one week)

Scenario 1

James works in a warehouse and earns \$13 per hour. Last week, he worked 46 hours. His employer pays time and a half for all hours worked over 40.

Questions:

1. How many overtime hours did James work? _____
2. What is James's overtime pay rate? _____
3. How much overtime pay did he earn? _____

Scenario 2

Olivia works as a receptionist and earns \$16 per hour. In one week, she worked 42 hours. Overtime pay is 1.5 times the regular rate.

Questions:

1. How many overtime hours did Olivia work? _____
2. What is her overtime hourly rate? _____
3. How much overtime pay should she receive? _____

WEEKEND OVERTIME (Weekend hours paid at time and a half)

Scenario 3

Daniel earns \$15 per hour. He worked 40 hours Monday through Friday and 6 hours on Saturday. Saturday hours are paid at time and a half.

Questions:

1. How many weekend overtime hours did Daniel work? _____
2. What is his weekend overtime rate? _____
3. How much weekend overtime pay did he earn? _____

Scenario 4

Sophia earns \$14 per hour. She worked 38 weekday hours and 8 hours on Sunday. Sunday hours are paid at time and a half.

Questions:

1. Which hours count as overtime? _____
2. What is Sophia's overtime pay rate? _____
3. How much overtime pay did she earn? _____

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HOLIDAY PAY (Holiday hours paid at double time)

Scenario 5

Marcus earns \$18 per hour. He worked 8 hours on a holiday. Holiday pay is double the regular rate.

Questions:

1. What is Marcus's holiday pay rate? _____
2. How much did he earn for the holiday hours? _____

Scenario 6

Ava earns \$20 per hour. She worked 6 hours on a company-recognized holiday. Holiday hours are paid at two times the regular rate.

Questions:

1. What is Ava's holiday pay rate? _____
2. How much holiday pay did she earn? _____

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MONTHLY OVERTIME (Total overtime hours added for the month)

Scenario 7

Luis earns \$17 per hour. During one month, he worked:

Week 1: 42 hours

Week 2: 45 hours

Week 3: 40 hours

Week 4: 44 hours

Overtime is paid at time and a half.

Questions:

1. How many total overtime hours did Luis work for the month? _____
2. What is his overtime pay rate? _____
3. How much overtime pay did he earn for the month? _____

Scenario 8

Nina earns \$12 per hour. Her total overtime hours for the month equal 9 hours. Overtime pay is 1.5 times the regular rate.

Questions:

1. What is Nina's overtime pay rate? _____
2. How much overtime pay should she receive for the month? _____

Outcome #5

Gross Pay and Net Pay

When you start working at a job, you'll quickly learn that the money you earn isn't exactly the same as the money you receive. This difference exists because of gross pay and net pay, two important terms that every worker should understand.

Gross pay is the total amount of money you earn before anything is taken out. If your boss says you'll make fifteen dollars per hour and you work twenty hours a week, your gross pay would be three hundred dollars. This is the number that appears in your job contract or agreement. It sounds great, but unfortunately, you won't receive all of it.

Net pay, which people often call "take-home pay," is the actual amount of money that goes into your bank account or that you receive in your paycheck. It's always less than your gross pay because several things must be taken out first. These deductions include taxes that go to the government, like federal income tax and state income tax. You might also pay for Social Security and Medicare, which are programs that help people when they get older or if they become sick.

Some jobs also take out money for health insurance, which helps pay for doctor visits and medicine if you need them. If your company offers a retirement plan, you might choose to save some money for when you stop working many years in the future. These are voluntary deductions because you decide whether you want them or not.

Let's look at an example to make this clearer. Imagine you earned one thousand dollars in gross pay this month. The government might take out about two hundred dollars for various taxes. Your health insurance could cost fifty dollars. If you're saving for retirement, maybe you put away another fifty dollars. After all these deductions, your net pay would be about seven hundred dollars. That's what you actually get to spend.

Understanding the difference between gross pay and net pay is essential because it helps you plan your budget. When you're looking for a job, always remember that the salary they mention is usually the gross pay. You'll need to calculate what your net pay will be so you know how much money you'll really have each month for rent, food, and other expenses.

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Outcome #5

Gross Pay and Net Pay Exercises

Instructions: Read the passage about gross pay and net pay. Answer the questions below.

Multiple Choice

1. What is gross pay?

- a) The money you spend
- b) The money after taxes
- c) The total money you earn before anything is taken out
- d) The money in your bank account

2. What is net pay?

- a) The money your boss promises
- b) The money you save for retirement
- c) The money you earn per hour
- d) The money you actually receive

3. Why is net pay smaller than gross pay?

- a) You work fewer hours
- b) Money is taken out for taxes and other costs
- c) Your boss makes a mistake
- d) You spend the money too fast

True/False. Write True or False after the statement

1. The amount of money a worker earns before any deductions are made is called gross pay.
2. Health insurance and retirement savings are considered mandatory deductions because every worker must pay them.
3. When looking for a job, the salary that a company usually offers refers to the worker's net pay.
4. Social Security and Medicare are programs that support people who are elderly or unwell.

5. In the example from the text, tax deductions take out a larger portion of gross pay than health insurance and retirement savings combined.

Short Answers

Write your answers using complete sentences.

1. Why is the amount of money a worker receives always less than the amount they earn?
2. How can you calculate your net pay if you know your gross pay and your deductions?
3. What is the difference between required deductions and voluntary deductions, according to the text?
4. Why is it important to know your net pay before you start a new job?
5. How does the example in the text show the difference between gross pay and net pay?

Outcome #5

Calculating Net Pay

Instructions: Read each scenario and answer the questions. Each pay period is for two weeks unless otherwise stated.

Scenario 1:

Maria received her paycheck for working two weeks. She works full-time, 40 hours per week. Her rate of pay is \$15.00 per hour. Her company takes out \$200.00 for federal, state, Medicare and Social Security. Maria has health insurance and pays \$100 per pay period (every two weeks). Maria also has \$50.00 taken out every pay period for retirement. How much is Maria's:

Regular Pay: _____

Overtime Pay: _____

Deductions: _____

Gross Pay: _____

Net Pay: _____

Scenario 2:

Jon works full-time, 40 hours per week and gets paid every two weeks. Jon's pay rate is 22.50 per hour. Jon just received his most recent paycheck. During this pay period, Jon also worked 10 hours of overtime. His company pays time and half for overtime. Jon has health insurance for his family and pays \$200.00 each pay period. He also has \$150.00 taken out every pay period for retirement. His company deducts \$500.00 for federal and state income taxes, Medicare and Social Security. How much is Jon's:

Regular Pay: _____

Overtime Pay: _____

Deductions: _____

Gross Pay: _____

Net Pay: _____

Scenario 3:

Jake is a college student who works 20 hours per week at a bookstore. The pay period is April 16, 2025 – April 30, 2025. His hourly rate of pay is \$15.00. The bookstore takes out \$60.86 for federal and state income tax and Social Security. In this pay period, the bookstore takes out \$50.00 for Jake's employee uniform. How much is Jake's:

Regular Pay: _____

Overtime Pay: _____

Deductions: _____

Gross Pay: _____

Net Pay: _____

Scenario 4:

Leyla works full-time at a factory and is paid \$17.50 an hour. She works 40 hours each week. This pay period she worked 12 hours of overtime. The factory deducts \$450.00 for federal and state income tax and Social Security. Leyla also has \$65.00 taken out for retirement. Leyla's company also offers health insurance. She pays \$150 each month for medical coverage, and this amount is divided between her paychecks. How much is Leyla's:

Regular Pay: _____

Overtime Pay: _____

Deductions: _____

Gross Pay: _____

Net Pay: _____

Scenario 5:

Tomasz has worked for a company for many years. He works 40 hours each week and often works overtime. Tomasz's hourly rate of pay is 33.50. During this pay period, Tomasz also worked 15 hours of overtime. The company takes out \$1,000.00 for federal and state income tax and Social Security. Tomasz also pays \$180.00 per pay period for health insurance. He also has \$200.00 taken out each pay period for retirement. How much is Tomasz's:

Regular Pay:_____

Overtime Pay:_____

Deductions:_____

Gross Pay:_____

Net Pay:_____

Outcome #6

Calculating Hotel Room Discount Rates

Instructions: Read through each scenario. Using the information provided, give answers under the **Calculate** section at the end of each scenario. The answer could be the discount rate per day, the discount rate for the stay, or the percentage offered.

Scenario 1: Extended Stay Discount

Guest: Hi, I'm planning to stay for about a week. Do you offer any discounts for longer stays?

Agent: Absolutely! May I ask how many nights you're considering?

Guest: Seven nights.

Agent: Great! Our standard rate is \$180 per night, but for stays of 7 nights or more, we can offer a 15% extended-stay discount. That brings your nightly rate down to _____. The total for your stay will be _____.

Guest: That sounds good. Does that include housekeeping?

Agent: Yes, it does, plus you'll receive priority room servicing during your stay.

Guest: Perfect, let's book it.

Calculate:

Original total for the stay without discount is _____

The nightly rate with discount is _____

The total for the stay is _____

Scenario 2 – Price Match Request

Guest: I found a nearby hotel offering a room for \$190 a night. Can you match that?

Agent: Thank you for bringing that to our attention. Let me check availability and comparable room types.

Guest: It's a similar room with the same amenities.

Agent: I see. Our standard rate is \$220, but we'd be happy to match the \$190.00 rate. And I can extend a 5% discount for booking directly with us. That would bring your rate to \$_____ per night.

Guest: That's even better. Thank you!

Agent: We're glad to have you stay with us.

Calculate:

Including the 5% discount, the final rate per night is _____

Scenario 3 – Group Booking (Corporate/Event)

Guest: Hi, I need to reserve about five rooms for an upcoming conference. Do you have group rates?

Agent: Yes, we do! For group bookings of 5 rooms or more, we offer a 20% discount.

Guest: Great! This would be for two nights.

Agent: Perfect. Our standard rate is \$200 per room per night, but with the group discount, it drops to \$_____ per room.

Guest: That's helpful. Is there anything else included?

Agent: We can also arrange a group check-in and reserve meeting space if needed.

Guest: That would be great—please proceed with the booking.

Calculate:

The discounted price per room is _____

The total for one room for two nights is _____

The total for all five rooms for two nights is _____

Scenario 4 – Customer Complaint

Guest: I'm really disappointed—the room wasn't ready on time, and it's been quite noisy.

Agent: I sincerely apologize for the inconvenience. That's not the experience we want for our guests.

Guest: It's been frustrating.

Agent: I completely understand. I see you are staying with us for three nights, and the original rate was \$150.00 a night. As a gesture of goodwill, I can apply a 25% discount to one night of your stay. Your new total will be _____.

Guest: I appreciate that.

Agent: Additionally, I can note your preference for a quieter room and arrange a move if you'd like.

Guest: That would help, thank you.

Calculate:

The original total for a three-night stay was _____

The amount of the 25% discount is _____

The final total for a three-night stay is _____

Scenario 5 – Repeat Guest

Guest: Hi, I've stayed here a few times before. Are there any return guest discounts?

Agent: Welcome back! We truly value your loyalty. As a returning guest, you're eligible for a _____ discount.

Guest: That's great to hear.

Agent: Our standard rate is \$210 per night, so your preferred rate would be \$189.

Guest: Perfect. Please book it under my name.

Agent: Absolutely. We're glad to have you back with us.

Calculate:

The customer receives a _____ percent discount

Scenario 6 – Rewards Program Member

Guest: Hi, I'm a member of your rewards program. Do I get a discounted rate if I book directly?

Agent: Absolutely and thank you for being a valued member. May I have your membership number or the email associated with your account?

Guest: Sure, it's under [email].

Agent: Thank you. I've located your profile. As a rewards member, you're eligible for our exclusive member rate, which is typically 15 percent lower than our standard rate.

Guest: Great! What would that be for my stay?

Agent: Our standard rate is \$254.00 per night, so your member rate comes to \$_____ per night.

Guest: Nice, that helps. Are there any other perks included?

Agent: Yes! Along with the discounted rate, you'll earn points for your stay, and based on your tier status, you may also qualify for early check-in, late checkout, or room upgrades.

Guest: Perfect. Let's go ahead and book for five nights.

Agent: Wonderful. We appreciate your loyalty and look forward to welcoming you.

Calculate:

The discount for one night is _____.

The cost of the room for five nights is _____

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Outcome 6

Calculating Hotel Room Discount Rates – Answer Key

Scenario 1

Original total for the stay without discount = \$1,260.00

The nightly rate with discount = \$153.00 per night

The total for the stay = \$1,071.00

Scenario 2

Including the 5% discount, the final rate per night = \$185.00

Scenario 3

The discounted price per room per night = \$160.00

The total for one room for two nights = \$320.00

The total for all five rooms for two nights is = 1,600.00

Scenario 4

The original total for a three-night stay = \$450.00

The amount of the 25% discount = \$37.50

The final total for a three-night stay = \$412.50

Scenario 5

The discount = 10%

Scenario 6

The discount for one night = \$38.10

The cost of one room for one night = \$222.90

The cost of the room for five nights = \$1,114.50

Outcome #7

How to Calculate Cleaning Solution Ratios

You will learn how to **correctly scale cleaning solutions** by using ratios so your mixture is safe and effective.

The 3-Step Method

Step 1: Find Total Parts

Add all parts in the ratio.

Example:

2 parts water + 1 part vinegar = 3 total parts

Write: **Total Parts** = _____

Step 2: Find the Scale Factor

Divide the total amount you NEED by the total parts.

Formula:

Scale Factor = Total Amount ÷ Total Parts

Example:

6 cups ÷ 3 parts = 2

Write: **Scale Factor** = _____

Step 3: Multiply Each Ingredient

Multiply each part by the scale factor

Example:

Water: $2 \times 2 = 4$ cups

Vinegar: $1 \times 2 = 2$ cups

Write:

- Water = _____
 - Other ingredient = _____
-

Example

Recipe:

- 1 cup water
 - 1 cup vinegar
- Need: **8 cups total**

Step 1:

Total parts = $1 + 1 = 2$

Step 2:

Scale factor = $8 \div 2 = 4$

Step 3:

- Water = $1 \times 4 = 4$ cups
- Vinegar = $1 \times 4 = 4$ cups

Final Answer: 4 cups water, 4 cups vinegar

Scaling Down (Smaller Batch)

If making LESS:

- Convert units first (gallon → quarts, etc.)
- Then divide

Example:

1 gallon = **4 quarts**

If you only need 1 quart:

Scale factor = $1 \div 4 = 1/4$

Multiply everything by **1/4**

Helpful Conversions

- 1 gallon = 4 quarts
 - 1 quart = 4 cups
 - 1 cup = 16 ounces
 - 1 tablespoon = 3 teaspoons
-

Remember

Always:

- Do the math BEFORE mixing
- Check your units (cups, gallons, oz)
- Measure carefully

Never:

- Guess amounts
- Mix without calculating
- Change only one ingredient (ratios must stay balanced)

Why This Matters

In real jobs (custodial, healthcare, food service):

- Too strong = **unsafe**
- Too weak = **doesn't work**

Accurate math = **safe workplace**

Generated by CoPilot AI, 5/10/26

Outcome 7

Calculating Cleaning Solution Ratios - Practice Calculations

Instructions: For each calculation, work through Steps 1 – 3 and calculate the Total Parts, Scale Factor, and Multiply. Write the ratio at the top.

Calculation 1

Ratio:

1 part cleaner

2 parts water

Total = 9 oz

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

9 ÷ _____ = _____

Step 3: Multiply

Cleaner = 1 × _____ = _____ oz

Water = 2 × _____ = _____ oz

Calculation 2

Ratio:

3 parts water

1 part vinegar

Total = 12 cups

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

$$12 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Step 3: Multiply

$$\text{Water} = 3 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

$$\text{Vinegar} = 1 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

Calculation 3

Ratio:

2 parts soap

1 part water

Total = 6 cups

Step 1: Total Parts

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ parts}$$

Step 2: Scale Factor

$$6 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Step 3: Multiply

$$\text{Soap} = 2 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

$$\text{Water} = 1 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

Calculation 4

Ratio:

4 parts water

1 part disinfectant

Total = 20 oz

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

20 ÷ _____ = _____

Step 3: Multiply

Water = 4 × _____ = _____ oz

Disinfectant = 1 × _____ = _____ oz

Calculation 5

Ratio:

1 part soap

3 parts water

Total = 8 gallons

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

8 ÷ _____ = _____

Step 3: Multiply

Soap = 1 × _____ = _____ gallons

Water = 3 × _____ = _____ gallons

Reminder

Always follow: **1. Add parts** → **2. Divide** → **3. Multiply**

Generated by CoPilot AI, 5/10/26

Outcome 7

Calculating Cleaning Solutions Ratios - Practice Calculations

Answer Key

Calculation 1

Ratio: 1 cleaner, 2 water | Total = 9 oz

Step 1: Total parts

$$1 + 2 = \mathbf{3 \text{ parts}}$$

Step 2: Scale factor

$$9 \div 3 = \mathbf{3}$$

Step 3: Multiply

$$\text{Cleaner} = 1 \times 3 = \mathbf{3 \text{ oz}}$$

$$\text{Water} = 2 \times 3 = \mathbf{6 \text{ oz}}$$

Calculation 2

Ratio: 3 water, 1 vinegar | Total = 12 cups

Step 1: Total parts

$$3 + 1 = \mathbf{4 \text{ parts}}$$

Step 2: Scale factor

$$12 \div 4 = \mathbf{3}$$

Step 3: Multiply

$$\text{Water} = 3 \times 3 = \mathbf{9 \text{ cups}}$$

$$\text{Vinegar} = 1 \times 3 = \mathbf{3 \text{ cups}}$$

Calculation 3

Ratio: 2 soap, 1 water | Total = 6 cups

Step 1: Total parts

$$2 + 1 = \mathbf{3 \text{ parts}}$$

Step 2: Scale factor

$$6 \div 3 = \mathbf{2}$$

Step 3: Multiply

$$\text{Soap} = 2 \times 2 = \mathbf{4 \text{ cups}}$$

$$\text{Water} = 1 \times 2 = \mathbf{2 \text{ cups}}$$

Calculation 4

Ratio: 4 water, 1 disinfectant | Total = 20 oz

Step 1: Total parts

$$4 + 1 = \mathbf{5 \text{ parts}}$$

Step 2: Scale factor

$$20 \div 5 = \mathbf{4}$$

Step 3: Multiply

$$\text{Water} = 4 \times 4 = \mathbf{16 \text{ oz}}$$

$$\text{Disinfectant} = 1 \times 4 = \mathbf{4 \text{ oz}}$$

Calculation 5

Ratio: 1 soap, 3 water | Total = 8 gallons

Step 1: Total parts

$$1 + 3 = \mathbf{4 \text{ parts}}$$

Step 2: Scale factor

$$8 \div 4 = \mathbf{2}$$

Step 3: Multiply

Soap = $1 \times 2 = \mathbf{2 \text{ gallons}}$

Water = $3 \times 2 = \mathbf{6 \text{ gallons}}$

Outcome 7

Calculating Cleaning Solutions Ratios

Instructions: Complete the steps to calculate the ratios for different cleaning solutions.

Calculation 1

Ratio:

1 part soap
1 part water
Total = 10 oz

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

10 ÷ _____ = _____

Step 3: Multiply

Soap = 1 × _____ = _____ oz
Water = 1 × _____ = _____ oz

Calculation 2

Ratio:

2 parts water
1 part cleaner
Total = 9 cups

Step 1: Total Parts

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ parts}$$

Step 2: Scale Factor

Step 3: Multiply

$$\text{Water} = 2 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

$$\text{Cleaner} = 1 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

Calculation 3

Ratio:

1 part vinegar

3 parts water

Total = 8 cups

Step 1: Total Parts

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ parts}$$

Step 2: Scale Factor

$$8 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Step 3: Multiply

$$\text{Vinegar} = 1 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

$$\text{Water} = 3 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

Calculation 4

Ratio:

1 part cleaner

4 parts water

Total = 15 oz

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

15 ÷ _____ = _____

Step 3: Multiply

Cleaner = 1 × _____ = _____ oz

Water = 4 × _____ = _____ oz

Calculation 5

Ratio:

3 parts water

1 part disinfectant

Total = 8 oz

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

8 ÷ _____ = _____

Step 3: Multiply

Water = 3 × _____ = _____ oz

Disinfectant = 1 × _____ = _____ oz

Calculation 6

Ratio:

2 parts cleaner

2 parts water

Total = 20 oz

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

20 ÷ _____ = _____

Step 3: Multiply

Cleaner = 2 × _____ = _____ oz

Water = 2 × _____ = _____ oz

Calculation 7

Ratio:

1 part soap

2 parts water

Total = 6 cups

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

6 ÷ _____ = _____

Step 3: Multiply

Soap = $1 \times \underline{\hspace{2cm}}$ = $\underline{\hspace{2cm}}$ cups
Water = $2 \times \underline{\hspace{2cm}}$ = $\underline{\hspace{2cm}}$ cups

Calculation 8

Ratio:

4 parts water
1 part vinegar
Total = 10 cups

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$ parts

Step 2: Scale Factor

$10 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Step 3: Multiply

Water = $4 \times \underline{\hspace{2cm}}$ = $\underline{\hspace{2cm}}$ cups
Vinegar = $1 \times \underline{\hspace{2cm}}$ = $\underline{\hspace{2cm}}$ cups

Calculation 9

Ratio:

2 parts cleaner
1 part water
Total = 9 cups

Step 1: Total Parts

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$ parts

Step 2: Scale Factor

$$9 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Step 3: Multiply

$$\text{Cleaner} = 2 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

$$\text{Water} = 1 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ cups}$$

Calculation 10

Ratio:

1 part soap

3 parts water

Total = 4 gallons

Step 1: Total Parts

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ parts}$$

Step 2: Scale Factor

$$4 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Step 3: Multiply

$$\text{Soap} = 1 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ gallons}$$

$$\text{Water} = 3 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ gallons}$$

Calculation 11

Ratio:

2 parts water
1 part vinegar
Total = 6 gallons

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

6 ÷ _____ = _____

Step 3: Multiply

Water = 2 × _____ = _____ gallons
Vinegar = 1 × _____ = _____ gallons

Calculation 12

Ratio:

1 part cleaner
5 parts water
Total = 12 gallons

Step 1: Total Parts

_____ + _____ = _____ parts

Step 2: Scale Factor

12 ÷ _____ = _____

Step 3: Multiply

Cleaner = 1 × _____ = _____ gallons
Water = 5 × _____ = _____ gallons

Outcome 7

Calculating Cleaning Solution Ratios Worksheet Answer Key

Calculation 1.

Ratio: 1 soap, 1 water | Total = 10 oz

Step 1: $1 + 1 = 2$ parts

Step 2: $10 \div 2 = 5$

Step 3:

Soap = $1 \times 5 = 5$ oz

Water = $1 \times 5 = 5$ oz

Calculation 2.

Ratio: 2 water, 1 cleaner | Total = 9 cups

Step 1: $2 + 1 = 3$ parts

Step 2: $9 \div 3 = 3$

Step 3:

Water = $2 \times 3 = 6$ cups

Cleaner = $1 \times 3 = 3$ cups

Calculation 3.

Ratio: 1 vinegar, 3 water | Total = 8 cups

Step 1: $1 + 3 = 4$ parts

Step 2: $8 \div 4 = 2$

Step 3:

Vinegar = $1 \times 2 = 2$ cups

Water = $3 \times 2 = 6$ cups

Calculation 4.

Ratio: 1 cleaner, 4 water | Total = 15 oz

Step 1: $1 + 4 = 5$ parts

Step 2: $15 \div 5 = 3$

Step 3:

Cleaner = $1 \times 3 = 3$ oz

Water = $4 \times 3 = 12$ oz

Calculation 5.

Ratio: 3 water, 1 disinfectant | Total = 8 oz

Step 1: $3 + 1 = 4$ parts

Step 2: $8 \div 4 = 2$

Step 3:

Water = $3 \times 2 = 6$ oz

Disinfectant = $1 \times 2 = 2$ oz

Calculation 6.

Ratio: 2 cleaner, 2 water | Total = 20 oz

Step 1: $2 + 2 = 4$ parts

Step 2: $20 \div 4 = 5$

Step 3:

Cleaner = $2 \times 5 = 10$ oz

Water = $2 \times 5 = 10$ oz

Calculation 7.

Ratio: 1 soap, 2 water | Total = 6 cups

Step 1: $1 + 2 = 3$ parts

Step 2: $6 \div 3 = 2$

Step 3:

Soap = $1 \times 2 = 2$ cups

Water = $2 \times 2 = 4$ cups

Calculation 8.

Ratio: 4 water, 1 vinegar | Total = 10 cups

Step 1: $4 + 1 = 5$ parts

Step 2: $10 \div 5 = 2$

Step 3:

Water = $4 \times 2 = 8$ cups

Vinegar = $1 \times 2 = 2$ cups

Calculation 9.

Ratio: 2 cleaner, 1 water | Total = 9 cups

Step 1: $2 + 1 = 3$ parts

Step 2: $9 \div 3 = 3$

Step 3:

Cleaner = $2 \times 3 = 6$ cups

Water = $1 \times 3 = 3$ cups

Calculation 10.

Ratio: 1 soap, 3 water | Total = 4 gallons

Step 1: $1 + 3 = 4$ parts

Step 2: $4 \div 4 = 1$

Step 3:

Soap = $1 \times 1 = 1$ gallon

Water = $3 \times 1 = 3$ gallons

Calculation 11.

Ratio: 2 water, 1 vinegar | Total = 6 gallons

Step 1: $2 + 1 = 3$ parts

Step 2: $6 \div 3 = 2$

Step 3:

Water = $2 \times 2 = 4$ gallons

Vinegar = $1 \times 2 = 2$ gallons

Calculation 12.

Ratio: 1 cleaner, 5 water | Total = 12 gallons

Step 1: $1 + 5 = 6$ parts

Step 2: $12 \div 6 = 2$

Step 3:

Cleaner = $1 \times 2 = 2$ gallons

Water = $5 \times 2 = 10$ gallons

Generated by CoPilot AI, 5/10/26

Outcome 8

Converting Celsius to Fahrenheit for Cooking and Baking

You're looking at a recipe online and it says to bake the cookies at 180 degrees Celsius. But your oven only shows Fahrenheit! Don't worry – this happens all the time in kitchens around the world, and it's easy to fix.

Many countries use Celsius to measure temperature, but in the United States, we use Fahrenheit. When you want to cook or bake something from a recipe that uses Celsius, you need to convert the temperature, so your food comes out perfectly.

There's a simple formula you can use. Take the Celsius temperature, multiply it by 9, then divide by 5, and finally add 32. Here is the conversion formula written as a mathematical equation:

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$$

Let's try it with our cookie example. It is 180 degrees Celsius. First, multiply 180 by 9, which gives us 1,620. Next, divide 1,620 by 5, and we get 324. Last, add 32 to 324. The answer is 356 degrees Fahrenheit.

If math isn't your favorite thing, don't worry! You can remember some common cooking temperatures instead. Water boils at 100 degrees Celsius, which equals 212 degrees Fahrenheit. A moderate oven is usually 180 degrees Celsius or 350 degrees Fahrenheit. For hot ovens, 200 degrees Celsius is the same as 400 degrees Fahrenheit.

Why does this matter so much? Because the right temperature is important in baking. If your oven is too hot, your cake might burn on the outside but stay raw inside. If it's too cool, your bread won't rise properly and could be heavy and flat.

Many modern ovens can switch between Celsius and Fahrenheit with just a button. Check your oven's manual to see if yours can do this. Some people also keep a conversion chart on their refrigerator or save one on their phone.

You can also find helpful apps and websites that do the math for you instantly. Just type in the Celsius number, and it shows you the Fahrenheit temperature right away.

Once you practice a few times, converting temperatures becomes second nature. You'll be able to follow recipes from anywhere in the world and make delicious food every time!

Generated by Twee AI and CoPilot AI, 5/19/26

Outcome #8

Converting Celsius to Fahrenheit for Cooking & Baking (comprehension exercises)

Vocabulary Matching

Match the words with their meanings.

- | | |
|-------------|--|
| 1. Convert | A. A list of values for quick reference |
| 2. Formula | B. To change something into another form |
| 3. Moderate | C. A rule using numbers |
| 4. Chart | D. Not too hot or too cold |

Multiple Choice

Choose the best answer.

1. What is the main purpose of the passage?
A. To explain how ovens work
B. To teach how to convert Celsius to Fahrenheit
C. To describe different types of cookies
D. To compare cooking methods
2. What is the formula used to convert Celsius to Fahrenheit?
A. $(^{\circ}\text{C} \times 5/9) - 32$
B. $(^{\circ}\text{C} \times 9/5) + 32$
C. $(^{\circ}\text{F} \times 9/5) + 32$
D. $(^{\circ}\text{C} \div 9) + 32$

3. What is 180°C in Fahrenheit?

A. 324°F

B. 356°F

C. 400°F

D. 212°F

4. Why is temperature important in baking?

A. It changes the color of food only

B. It affects how food cooks and rises

C. It makes ovens last longer

D. It helps recipes look nice

True or False

Write True (T) or False (F).

1. The United States uses Celsius for cooking temperatures.

2. Water boils at 212°F.

3. 200°C is equal to 350°F.

4. Some ovens can switch between Celsius and Fahrenheit.

5. Apps can help convert temperatures.

Short Answer

1. Why do people need to convert Celsius to Fahrenheit?

2. What happens if the oven is too hot?
3. What can happen if the oven is too cool?
4. Name two ways to convert temperatures without doing the math.
5. What is one common oven temperature in Celsius and Fahrenheit?

Fill in the Blanks

1. The formula is $(^{\circ}\text{C} \times \underline{\hspace{1cm}} / \underline{\hspace{1cm}}) + \underline{\hspace{1cm}}$.
2. A moderate oven is about $\underline{\hspace{1cm}}^{\circ}\text{C}$ or $\underline{\hspace{1cm}}^{\circ}\text{F}$.
3. If the oven is too hot, food may .
4. If the oven is too cool, bread may not .
5. Water boils at $\underline{\hspace{1cm}}^{\circ}\text{C}$ and $\underline{\hspace{1cm}}^{\circ}\text{F}$.

Application

1. Convert 200°C to Fahrenheit.
2. Convert 100°C to Fahrenheit.

Outcome #8

Celsius to Fahrenheit Worksheet

Directions: Use the formula $^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$ to convert each temperature.

1. Convert 0°C to Fahrenheit: _____ $^{\circ}\text{F}$
2. Convert 10°C to Fahrenheit: _____ $^{\circ}\text{F}$
3. Convert 25°C to Fahrenheit: _____ $^{\circ}\text{F}$
4. Convert 30°C to Fahrenheit: _____ $^{\circ}\text{F}$
5. Convert 37°C to Fahrenheit: _____ $^{\circ}\text{F}$
6. Convert 50°C to Fahrenheit: _____ $^{\circ}\text{F}$
7. Convert 75°C to Fahrenheit: _____ $^{\circ}\text{F}$
8. Convert 100°C to Fahrenheit: _____ $^{\circ}\text{F}$
9. Convert -10°C to Fahrenheit: _____ $^{\circ}\text{F}$
10. Convert -20°C to Fahrenheit: _____ $^{\circ}\text{F}$

Outcome #8

Celsius to Fahrenheit Worksheet Answer Key

1. $0^{\circ}\text{C} = 32^{\circ}\text{F}$
2. $10^{\circ}\text{C} = 50^{\circ}\text{F}$
3. $25^{\circ}\text{C} = 77^{\circ}\text{F}$
4. $30^{\circ}\text{C} = 86^{\circ}\text{F}$
5. $37^{\circ}\text{C} = 98.6^{\circ}\text{F}$
6. $50^{\circ}\text{C} = 122^{\circ}\text{F}$
7. $75^{\circ}\text{C} = 167^{\circ}\text{F}$
8. $100^{\circ}\text{C} = 212^{\circ}\text{F}$
9. $-10^{\circ}\text{C} = 14^{\circ}\text{F}$
10. $-20^{\circ}\text{C} = -4^{\circ}\text{F}$

Outcome #8

Celsius to Fahrenheit Recipe Conversions

Directions: Use the conversion formula to convert the cooking/baking temperatures from Celsius (°C) to Fahrenheit (°F).

Conversion Formula

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$$

1. Classic Chocolate Chip Cookies

Temperature: 180°C

°F _____

Bake 10–12 minutes.

2. Roasted Chicken

Temperature: 200°C

°F _____

Roast 1 hour 15 minutes.

3. Banana Bread

Temperature: 175°C

°F _____

Bake 50–60 minutes.

4. Roasted Vegetables

Temperature: 220°C

°F _____

Roast 25–30 minutes.

5. Lasagna

Temperature: 190°C

°F _____

Bake 40–45 minutes.

6. Baked Salmon

Temperature: 180°C

°F _____

Bake 12–15 minutes.

7. Apple Pie

Temperature: 200°C

°F _____

Bake 45–50 minutes.

8. Slow-Roasted Beef

Temperature: 150°C

°F _____

Cook 2.5–3 hours.

9. Pizza (Homemade)

Temperature: 230°C

°F _____

Bake 10–15 minutes.

10. Baked Potatoes

Temperature: 210°C

°F _____

Bake 45–60 minutes.

Outcome #8

Recipe Conversions Answer Key

1. Chocolate Chip Cookies

°F 356

2. Roasted Chicken

°F 292

3. Banana Bread

°F 347

4. Roasted Vegetables

°F 428

5. Lasagna

°F 374

6. Baked Salmon

°F 356

7. Apple Pie

°F

8. Slow-Roasted Beef

°F 302

9. Pizza (Homemade)

°F 446

10. Baked Potatoes

°F 410