



**STANISLAUS  
COUNTY HUMAN  
RELATIONS**

Take Your Place.

# Basic Math Practice Test

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## Welcome

Thank you for your interest in employment with Stanislaus County. This booklet is designed to familiarize and assist you with preparing for County tests containing multiple-choice items. The sample questions provided in this study guide are intended to give you an idea of the kinds of questions you may encounter in County tests. **However, it is important to note that actual test questions will vary in format, content, and level of difficulty, depending on the job class being tested.**

## About the County's Examinations

As an Equal Opportunity Employer, Stanislaus County takes steps to ensure that our exam content is job-related. We conduct studies to determine the knowledge, skill, abilities and personal characteristics that are essential to satisfactorily perform the duties of the job. These studies assist us in developing the content of our examinations. Testing applicants for jobs provides us with an objective and cost-effective means to assess the qualifications of our applicants.

## How should I prepare for the Written Test?

To prepare for the written test, you should study the concepts assessed in each section. It is likely that there will be several sections to the written test in addition to the one covered in this booklet; thus, it is in your benefit to **carefully** read the job bulletin to determine the knowledge, skills, and ability areas the written test will cover. In addition, it is important that you read the **entire** written test notice for the location and time of the written test as well as for parking instructions and other important information. Pay special attention to whether testing aids/materials such as hand-held calculators are allowed in the written test. If the test notice indicates that testing aids/materials are allowed, then you are strongly advised to bring these with you, as there may not be enough to provide one for everybody. On test day, it is recommended that you arrive 15 minutes prior to the test's starting time, wear comfortable clothes, and make sure you are well-rested. Also, remember to bring your test notice and a picture I.D. such as a driver license, or you may not be admitted into the test.

**Note:** Please check the County website for instructions on how to submit disability accommodation requests, such as readers or interpreters. The County will attempt to meet reasonable accommodation requests whenever possible.

## Test-Taking Tips

Most County tests have a set time limit, so it is important that you work quickly, but not so fast as to become careless. Always read all the possible choices before marking your answer. If you don't know the answer to a problem, it is usually best to skip it and move on to the others. Note that on most County test, your score is based on the number of correct responses. If you are not sure of the answer to a problem, eliminate the answers you believe to be wrong and mark the choice that is your best response. Above all, budget your time, pace yourself, and avoid getting bogged down on any single question.

## Disclaimer

Though this guide presents useful and practical information on this subject area, there is *no guarantee* that someone who reads this guide will be able to perform better on a County examination. By merely using this guide, you consent to understanding and agreeing with this disclaimer.

**Stanislaus County** wishes you the best of luck in your career endeavors.

## Sample Basic Arithmetic Questions

Basic arithmetic items test your knowledge of and ability to interpret and solve problems of a mathematical nature, using such operations as addition, subtraction, division, and multiplication, and in a variety of problem formats and situations. However, actual problems will vary from one test to another. For example, a test problem may require you to calculate the totals in a supply budget, much like you may be asked to do in the position for which you are testing.

The following are examples of the types of basic arithmetic problems most common to County examinations. Answers and explanations for the problems begin on page 8 of this practice test. A glossary of mathematical terms has also been included on page 7 for your reference.

1.     4 feet, 5¼ inches  
      30 feet, 6 inches  
      10 feet, 2 inches  
      +  3¼ inches
- A. 44 feet, 11 inches  
B. 45 feet, 5 inches  
C. 46 feet, 2 inches  
D. 47 feet, 1 inches

2.     246  
      x 132  
      \_\_\_\_\_
- A. 32,472  
B. 34,272  
C. 35,242  
D. 36,422

3.     45.  
      .9  
     436.005  
     1168.  
     + .64532  
      \_\_\_\_\_
- A. 1648.55063  
B. 1649.63082  
C. 1650.55032  
D. 1750.60232

4.      $9/10 - 3/20$
- A.  $3/4$   
B.  $4/5$   
C.  $4/15$   
D.  $5/15$

5. 
$$\begin{array}{r} 9 \text{ days, } 18 \text{ hours, } 37 \text{ minutes} \\ 5 \text{ days, } 16 \text{ hours, } 16 \text{ minutes} \\ 2 \text{ days, } 15 \text{ hours, } 13 \text{ minutes} \\ + \quad 10 \text{ hours, } 11 \text{ minutes} \\ \hline \end{array}$$
- A. 17 days, 30 hours, 16 minutes  
B. 18 days, 12 hours, 17 minutes  
C. 18 days, 15 hours, 27 minutes  
D. 19 days, 20 hours, 57 minutes
6. 65 is what percent of 500?
- A. 6  
B. 8  
C. 11
7. Juanita's salary is \$2,650.00 per month. If she receives a salary increase of 5%, what is her new monthly salary?
- A. \$2,782.50  
B. \$2,785.00  
C. \$2,900.00  
D. \$3,001.50
8. If 43 of the 148 reams of paper purchased by a department are used, what is the percentage that remains? Round your answer to the nearest whole percent.
- A. 71%  
B. 72%  
C. 73%  
D. 75%
9. If two-thirds of Sam's weekly income is \$480, what is one-fourth of his weekly income?
- A. \$165  
B. \$180  
C. \$240  
D. \$280
10. A 9' x 15' tool room was enlarged to 11' x 20'. How many square feet of floor space were added?
- A. 70 square feet  
B. 75 square feet  
C. 80 square feet  
D. 85 square feet

11. In July, 305 employees worked on an assembly line. In August, 30 employees resigned and 11 were hired. In September, 9 employees resigned and 23 were hired. In October, 17 employees were hired. What was the total number of employees as of November 1st?
- A. 302
  - B. 309
  - C. 317
  - D. 325
12. In a Social Services Agency, each of the 18 employees is responsible for maintaining a caseload of 360 cases. When 3 employees leave the department, their caseload is redistributed equally among the remaining employees. How many cases are each of the remaining employees now responsible for maintaining?
- A. 405
  - B. 432
  - C. 468
  - D. 472
13. Fred's gross salary is \$850 per week. From his salary, 11% is removed for federal deductions; 5.5% for state deductions; and 6.2% for the company's pension plan. If each of these deductions is taken as a percent of Fred's gross salary, what is his net salary for a four week period?
- A. \$2,108.00
  - B. \$2,343.80
  - C. \$2,628.20
  - D. \$3,189.40
14. Ernesto takes out a loan from his retirement fund. If he is repaying the loan in installments of \$72.12 every two weeks, how much of the loan will be paid back in 32 weeks?
- A. \$1,081.80
  - B. \$1,153.92
  - C. \$1,276.48
  - D. \$1,730.88
15. Martha can file 50 letters in 10 minutes. David can file 40 letters in the same amount of time. How many letters will the two of them file in 9 hours?
- A. 4,860
  - B. 4,870
  - C. 4,950
  - D. 4,980

16. Four machines, each costing \$5,700, were purchased for an office. Each machine requires the service of an operator at a salary of \$1,100 per month. These machines are to replace 8 clerks, two of whom each earn \$750 per month, three of whom each earn \$650 per month, and three of whom each earn \$950 per month. How many months will it take to recover the cost of the machines?
- A. 10 months
  - B. 11 months
  - C. 12 months
  - D. More than 12 months
17. An Information Services Manager is purchasing a large number of word processing software licenses at a cost of \$125 each. The software company gives a volume discount of 3.5% for large purchases. If the department manager has a budget of \$17,300 to purchase the licenses, approximately how many licenses can she purchase?
- A. 122
  - B. 138
  - C. 143
  - D. 146
18. An employee who earned \$550 a week working 35 hours had her pay increased by 5 percent. Later, her hours were reduced to 30 per week, but the new hourly rate of pay was retained. What was her new amount of weekly pay?
- A. \$475.50
  - B. \$495.00
  - C. \$525.75
  - D. \$550.00
19. If Kim reduces the weekly number of hours she works by one-fourth and her current weekly income is \$520.00, what is her new weekly income?
- A. \$285.00
  - B. \$335.00
  - C. \$360.00
  - D. \$390.00
20. Pamela's salary is \$3125.00 per month. If she receives a salary increase of 5%, her new monthly salary is
- A. \$3158.90.
  - B. \$3197.50
  - C. \$3215.65
  - D. \$3281.25

## Glossary of Mathematical Terms

<b>Area:</b>	The number of square units that covers a shape or figure
<b>Denominator:</b>	The bottom part of a fraction. (Ex: in the fraction $\frac{3}{4}$ , 4 is the denominator)
<b>Digit:</b>	The ten numerals 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. The number 14 has two digits: 1 and 4
<b>Difference:</b>	The result of subtracting one number from another
<b>Divisor:</b>	In a division problem, the number that is divided into another ( Ex: when dividing 4 into 20, the 4 would be the divisor, as it is used to divide the number 20 into five parts)
<b>Factor:</b>	One of two or more numerical values that are multiplied together to yield a product
<b>Fraction:</b>	A number expressed in terms of a numerator and denominator
<b>Least Common Multiple:</b>	The smallest, non-zero multiple of the denominators of two or more fractions
<b>Numerator:</b>	The top part of a fraction. (Ex: in the fraction $\frac{3}{4}$ , 3 is the numerator)
<b>Operation:</b>	Any one of the basic arithmetic functions of addition, subtraction, multiplication, or division
<b>Quotient:</b>	The result of dividing one number into another
<b>Sum:</b>	The result of adding together two or more numbers

## Answers and Explanations to Arithmetic Sample Questions

**Note:** Typically, there are multiple ways of obtaining the correct answers to each question, only one of which is provided as the answer explanation. Use the glossary on page 7 to help you define any terms with which you may be unfamiliar.

### 1. Correct Answer: B

- ◇ Add the measurements in the inches column, for a total of 17 inches (Step #1).
- ◇ Since 12 inches is equal to 1 foot, convert the 17 inches to 1 foot, 5 inches; carry the 1 foot into the feet measurement column; and sum (Step #2).

Step #1	Step #2
$\begin{array}{r} 4 \text{ feet, } 5\frac{1}{4} \text{ inches} \\ 30 \text{ feet, } 6 \text{ inches} \\ 10 \text{ feet, } 2 \text{ inches} \\ + \quad \quad 3\frac{3}{4} \text{ inches} \\ \hline 17 \text{ inches} \end{array}$	$\begin{array}{r} \text{1 foot} \\ 4 \text{ feet, } 5\frac{1}{4} \text{ inches} \\ 30 \text{ feet, } 6 \text{ inches} \\ 10 \text{ feet, } 2 \text{ inches} \\ + \quad \quad 3\frac{3}{4} \text{ inches} \\ \hline 45 \text{ feet, } 5 \text{ inches} \end{array}$

### 2. Correct Answer: A

- ◇ Working from right to left, multiply 246 by each of the three digits in the factor “132” separately. You may wish to add zero placeholders (shown in bold) to help ensure that columns are aligned correctly (Step #1).
- ◇ Add the products from Step #1 to arrive at the correct answer.

Step #1	Step #2
$\begin{array}{r} 246 \\ \times \quad 132 \\ \hline 492 \\ 738\mathbf{0} \\ 246\mathbf{00} \end{array}$	$\begin{array}{r} 246 \\ \times \quad 132 \\ \hline 492 \\ 738\mathbf{0} \\ + \quad 246\mathbf{00} \\ \hline 32472 \end{array}$

### 3. Correct Answer: C

- ◇ Set up the problem by adding zero placeholders (shown in bold) as necessary to ensure that columns and decimal points are aligned appropriately (Step #1).
- ◇ Working right to left, add each column, making sure to carry values over to the next column to the left as appropriate (Step #2).

Step #1	Step #2
$\begin{array}{r} \mathbf{00}45.00000 \\ \mathbf{0000.90000} \\ \mathbf{0}436.00500 \\ 1168.\mathbf{00000} \\ +\mathbf{0000.64532} \\ \hline \end{array}$	$\begin{array}{r} \text{1 1 1 1} \\ \mathbf{00}45.00000 \\ \mathbf{0000.90000} \\ \mathbf{0}436.00500 \\ 1168.\mathbf{00000} \\ +\mathbf{0000.64532} \\ \hline 1650.55032 \end{array}$

#### 4. Correct Answer: A

- ◇ To solve, find the least common multiple (LCM) for the denominator of each fraction. The LCM is the smallest non-zero number that is a multiple of both denominators. In this problem, the LCM is 20.
- ◇ Since 3/20 already has a denominator of 20, only 9/10 to be converted so that it was denominator of 20. Multiplying the denominator (10) by 2 converts it to 20; therefore, to convert the fraction 9/10, multiply both the numerator (9) and the denominator (10) by 2, so that the fraction becomes 18/20 (Step #1).
- ◇ Subtract 3/20 from 18/20 (by subtracting the numerators), for a difference of 15/20 (Step #2).
- ◇ Simplify 15/20 by dividing the numerator and denominator each by 5, to equal 3/4 (Step #3).

Step #1	Step #2	Step #3
$\frac{9 \times 2}{10 \times 2} = \frac{18}{20}$	$\frac{18}{20} - \frac{3}{20} = \frac{15}{20}$	$\frac{15 \div 5}{20 \div 5} = \frac{3}{4}$

#### 5. Correct Answer: B

- ◇ Add the measurements in the minutes column for a total of 77 minutes (Step #1).
- ◇ Since 60 minutes equals 1 hour, convert the 77 minutes from Step #1 into 1 hour, 17 minutes; carry the 1 hour into the hours measurement column; and sum for a total of 60 hours, 17 minutes (Step #2).
- ◇ Since 24 hours equals 1 day, convert the 60 hours from Step #2 into 2 days, 12 hours; carry the 2 days into the days measurement column; and sum for a total of 18 days (Step #3).

$\begin{array}{r} 9 \text{ days, } 18 \text{ hours, } 37 \text{ minutes} \\ 5 \text{ days, } 16 \text{ hours, } 16 \text{ minutes} \\ 2 \text{ days, } 15 \text{ hours, } 13 \text{ minutes} \\ + \quad \quad 10 \text{ hours, } 11 \text{ minutes} \\ \hline \quad \quad \quad 77 \text{ minutes} \end{array}$	$\begin{array}{r} \quad \quad \quad 1 \text{ hour} \\ 9 \text{ days, } 18 \text{ hours, } 37 \text{ minutes} \\ 5 \text{ days, } 16 \text{ hours, } 16 \text{ minutes} \\ 2 \text{ days, } 15 \text{ hours, } 13 \text{ minutes} \\ + \quad \quad 10 \text{ hours, } 11 \text{ minutes} \\ \hline \quad \quad 60 \text{ hours, } 17 \text{ minutes} \end{array}$	$\begin{array}{r} \quad \quad 2 \text{ days} \quad 1 \text{ hour} \\ 9 \text{ days, } 18 \text{ hours, } 37 \text{ minutes} \\ 5 \text{ days, } 16 \text{ hours, } 16 \text{ minutes} \\ 2 \text{ days, } 15 \text{ hours, } 13 \text{ minutes} \\ + \quad \quad \quad 10 \text{ hours, } 11 \text{ minutes} \\ \hline 18 \text{ days, } 12 \text{ hours, } 17 \text{ minutes} \end{array}$
<b>Step #1</b>	<b>Step #2</b>	<b>Step #3</b>

**6. Correct Answer: D**

- ◇ Divide 65 by 500. set up the problem by adding a decimal and zero placeholders (shown in bold) to make 65 into 65.**00**. Next, determine the decimal place for the answer by counting the number zero placeholders you added to 65 to make it divisible by 500. since two zeros were added to 65, count backwards from right to left two decimal places to convert the answer to .13 (Step #1).
- ◇ Multiply .13 by 100 to convert it to a percent. Add a decimal point and two zero placeholders (shown in bold) to make 100 into 100.00 to match the number of decimal places in the number it is being multiplied with .13 (which equals four) to determine that the answer should also have four decimal places. Count backwards from right to left four places and insert a decimal point, which results in 13.0000, or 13 (Step #2).

Step #1	Step #2
$\begin{array}{r} .13 \\ 500 \overline{) 65.00} \\ \underline{-50.0} \phantom{0} \\ 15.00 \\ \underline{15.00} \\ 0 \end{array}$	$\begin{array}{r} 100.00 \\ \times .13 \\ \hline 30000 \\ +10000 \\ \hline 130000 \\ \\ 13.0000 \end{array}$

**7. Correct Answer: A**

- ◇ Multiply \$2,650.00 by the decimal equivalent of 5% (.05) to determine that \$132.50 is the amount of the salary increase (Step #1).
- ◇ Add \$132.50 to Juanita’s previous monthly salary (\$2,650) to determine that \$2,782.50 is her new monthly salary (Step #2)

Step #1	Step #2
$\begin{array}{r} \$2650.00 \\ \times .05 \\ \hline \$132.50 \end{array}$	$\begin{array}{r} \$2650.00 \\ + \$132.50 \\ \hline \$2782.50 \end{array}$

**8. Correct Answer: A**

- ◇ Determine the number of reams of paper that remains by subtracting 43 from 148, to equal 105 (Step #1).
- ◇ Determine what percentage of 148 equals 105 by dividing 105 by 148 for an answer of .7094, which rounded to 71% (Step #2).

Step #1	Step #2
$\begin{array}{r} 148 \\ - 43 \\ \hline 105 \end{array}$	$\frac{105}{148} = .7094 = 71\%$

**9. Correct Answer: B**

- ◇ Since \$480 is two-thirds of Sam’s weekly income, divide 480 by 2 to determine that \$240 is one-third of his weekly income (Step #1).
- ◇ Multiply \$240 by 3 to determine that \$720 is his weekly income (Step #2).
- ◇ Divide \$720 by 4 to determine that \$180 is one-fourth of his weekly income (Step #3).

Step #1	Step #2	Step #3
$\begin{array}{r} 240 \\ 2 \overline{) 480} \\ \underline{-4} \phantom{0} \\ 08 \\ \underline{-8} \\ 00 \end{array}$	$\begin{array}{r} 240 \\ \times 3 \\ \hline 720 \end{array}$	$\begin{array}{r} 180 \\ 4 \overline{) 720} \\ \underline{-4} \phantom{0} \\ 32 \\ \underline{-32} \\ 00 \end{array}$

**10. Correct Answer: D**

- ◇ Find the total area of both the original tool room and the enlarged tool room (Step #1). The formula for area is  $A = L \times W$ , where  $A =$  area;  $L =$  length; and  $W =$  width. The product is expressed in square feet.
- ◇ Subtract the area of the original tool room from the area of the enlarged tool room to determine the amount of floor space that was added (Step #2).

**Step #1**                      Original tool room:  $9' \times 15' = 135$  square feet  
                                     Enlarged tool room:  $11' \times 20' = 220$  square feet

**Step #2**     $220 - 135 = 85$  square feet

**11. Correct Answer: C**

- ◇ Multiply the total number of cases per employee (360) by the total number of employees (18) to determine the total number of cases (Step #1)
- ◇ Divide the total number of cases (6480) by the remaining employees (15) to determine the number of cases per employee (Step #2).

Step #1                      305 (number of employees in July)  
                                      $\underline{- 39}$  (total number resigned from August through October)  
                                     266

Step #2                       $\underline{+ 51}$  (total number hired from August through October)  
                                     317

**12. Correct Answer: B**

- ◇ Multiply the total number of cases per employee (360) by the total number of employees (18) to determine the total number of cases (Step #1).
- ◇ Divide the total number of cases (6480) by the remaining employees (15) to determine the number of cases per employee (Step #2).

Step #1	Step #2
$\begin{array}{r} 360 \\ \times 18 \\ \hline 2880 \\ + 360 \\ \hline 6480 \end{array}$	$\begin{array}{r} 432 \\ 15 \overline{) 6480} \\ \underline{-60} \\ 48 \\ \underline{-45} \\ 30 \\ \underline{-30} \\ 0 \end{array}$

**13. Correct Answer: C**

- ◇ Multiply Fred's gross salary by the decimal equivalent of each percent deduction to get the dollar amount for each deduction; sum the three deductions (Step #1).
- ◇ Subtract the sum of the deductions from Fred's weekly gross salary to get his net salary (Step #2).
- ◇ Multiply Fred's weekly net salary by 4 to get his net pay for the four-week period (Step #3).

Step #1	Step #2	Step #3
$\begin{array}{l} \$850.00 \times 0.11 = \$93.50 \\ \$850.00 \times 0.055 = \$46.75 \\ \$850.00 \times 0.062 = \$52.70 \\ \hline \$192.95 \end{array}$	$\begin{array}{r} \$850.00 \\ - \$192.95 \\ \hline \$657.05 \end{array}$	$\begin{array}{r} \$657.05 \\ \times 4 \\ \hline \$2628.20 \end{array}$

**14. Correct Answer: B**

- ◇ Divide 32 by 2 to determine the total number of payments made during the 32-week period (Step #1).
- ◇ Multiply the number of payments (16) by the payment amount (\$72.12) to determine the total amount paid back at the end of the 32-week period (Step #2).

Step #1	Step #2
$\begin{array}{r} 16 \\ 2 \overline{) 32} \\ \underline{-2} \\ 12 \\ \underline{-12} \\ 0 \end{array}$	$\begin{array}{r} 72.12 \\ \times 16 \\ \hline 43272 \\ + 7212 \\ \hline 1153.92 \end{array}$

**15. Correct Answer: A**

- ◇ Divide 50 by 10 to determine the number of letters that Martha can file in one minute. Do the same for David by dividing 40 by 10; sum these amounts to determine the total number of letters these workers can file in one minute (Step #1).
- ◇ Multiply the total number of letters per minute (9) by the total number of minutes in one hour (60) to determine the total number of letters that Martha and David can file in one hour (Step #2).
- ◇ Multiply the total number of letters per hour that Martha and David can file by the number of hours these workers will spend filing letters. (Step #3).

	<b>Step #1</b>		<b>Step #2</b>		<b>Step #3</b>
Martha:	$50 \div 10 = 5$ letters per minute		60		540
David:	$40 \div 10 = 4$ letters per minute		$\begin{array}{r} \times 9 \\ \hline \end{array}$		$\begin{array}{r} \times 9 \\ \hline \end{array}$
	9 letters per minute		540		4860

**16. Correct Answer: C**

- ◇ Multiply the cost of each machine (\$5,700) by 4 to determine that the total purchase cost is \$22,800.
- ◇ Multiply the monthly salaries for each of the four operators (\$1,100) by 4 to determine that the *total monthly* labor cost to operate the four machines is \$4,400.
- ◇ Multiply the number of clerks by their respective monthly salary rate to determine that \$6,300 is the total monthly labor cost for the eight clerks as follows:  
 $(2 \times \$750) + (3 \times \$650) + (3 \times \$950) = \$6,300$ .
- ◇ Subtract the total salaries for the operators (\$4,400) from the total clerk salaries (\$6,300) to determine that the amount of monthly labor cost savings is \$1,900.
- ◇ Divide the total cost of the machines (\$22,800) by the total monthly savings (\$1,900) to determine that it will take 12 months to recover the cost of the machines.

**17. Correct Answer: C**

- ◇ Multiply the pre-discount cost per license (\$125) by the decimal equivalent of the percent discount (.035) to determine that \$4.38 (rounded) is the total savings per license.
- ◇ Subtract the total discount per license (\$4.38) from the pre-discount cost per license (\$125) to determine that \$120.62 is the discounted cost per license.
- ◇ Divide the total budgeted amount for licenses (\$17,300) by the discounted cost per license (\$120.62) to determine that 143 licenses can be purchased within the current budget.

**18. Correct Answer: B**

- ◇ Multiply the original weekly wage (\$550) by the decimal equivalent of 5 percent (.05) to determine that \$27.50 is the amount of the increase.
- ◇ Add the amount of the increase (\$27.50) to the original weekly wage (\$550) to determine that \$577.50 is the new weekly wage.
- ◇ Divide the new weekly wage (\$577.50) by 35 to determine that \$16.50 is the new hourly rate.
- ◇ Multiply the new hourly rate (\$16.50) by 30 to determine that \$495.00 is the new amount of weekly pay.

19. **Correct Answer: D**

- ◇ Convert the fraction one-fourth (1/4) to a decimal by dividing the numerator in the fraction (1) by the denominator (4). Set up the problem by adding a decimal point and zero placeholders (shown in bold), to make 1 into **1.00**. Next, determine the decimal place for the answer by counting the number of zeros you added to 1 to make it divisible by 4. Since two zeros were added to 1, count backwards from right to left two decimal places to convert the answer to .25 (Step #1).
- ◇ Multiply .25 by \$520 to determine that \$130.00 is one-fourth of Kim’s weekly income. You may wish to add zero placeholders (shown in bold) to ensure that columns are aligned correctly (Step #2).
- ◇ Subtract \$130.00 from \$520.00 to get \$390.00m which is Kim’s new weekly income. (Step #3).

Step #1	Step #2	Step #3
$\begin{array}{r} .25 \\ 4 \overline{) 1.\mathbf{00}} \\ \underline{-0.8} \\ .20 \\ \underline{-.20} \\ 0 \end{array}$	$\begin{array}{r} 520 \\ \times .25 \\ \hline 2600 \\ +1040\mathbf{0} \\ \hline 13000 \\ \\ \$130.00 \end{array}$	$\begin{array}{r} \$520.00 \\ \underline{-\$130.00} \\ \$390.00 \end{array}$

20. **Correct Answer: D**

- ◇ Convert 5% to a decimal by dividing 5 by 100. Set up the problem by adding a decimal point and zero placeholders (shown in bold), to make 5 into **5.00**. Next, determine the decimal place for the answer by counting the number of zeros you added to 5 to make it divisible by 100. Since two zeros were added to 5, count backwards from right to left two decimal places and place a 0 before the 5 to convert the answer to .05 (Step #1)
- ◇ Multiply \$3125.00 by .05 to determine the amount of Pamela’s pay raise, to yield an answer of \$156.25 (Step #2).
- ◇ Making sure to carry values over across columns as necessary, add \$156.25 to Pamela’s previous salary for the sum of \$3281.25, her new monthly salary (Step #3).

Step #1	Step #2	Step #3
$\begin{array}{r} .05 \\ 100 \overline{) 5.\mathbf{00}} \\ \underline{-5.00} \\ 0 \end{array}$	$\begin{array}{r} \$ 3125.00 \\ \times .05 \\ \hline \$156.2500 \end{array}$	$\begin{array}{r} 1 \\ \$3125.00 \\ +\$ 156.25 \\ \hline \$3281.25 \end{array}$