



Los Medanos College

Practice Math Competency Exam for Certificate of Achievement

Please Read Carefully

The math competency requirement for a **Certificate of Achievement** at Los Medanos Collage may be satisfied by course or exam. Students must either:

1. Complete Math 2, Math 4, Math 7, Math 9, or 3 units of math above this level, with a grade of “C” or better, -or-
2. Achieve a passing score on the “Certificate of Achievement Math Competency Exam.”

Note: No grade or units are received for passing the competency exam. Results do not transfer and are valid only at LMC.

Exam Information

Time: 90 minutes.

Passing score: 20 out of 24 problems correct.

When/Where: The exam is scheduled individually in MA 107. Please contact the Math Lab Coordinator at (925) 439-2181 ext 3470 (8am –5pm) or ext 3358 (5pm – 9pm) in order to make an appointment.

Appointment Date and Time: _____

Topics: Bank checking, wages (including overtime and commission), interest, installment buying, percent increase and decrease, ratio, proportion, area, fractions, income tax, averages, and elapsed time.

Preparation: Study the attached sample problems. Review as needed.

You may use: Scientific calculator, #2 pencil, and eraser. Scratch paper will be provided.

Identification: Photo ID required - Drivers License/CA ID or Passport.

Results: Usually available within 1 week.

Repeat Attempts: Exam may be taken a total of 3 times. If the exam is not passed after the third attempt, one must fulfill option 1 (listed above) in order to satisfy their math competency requirement for the Certificate of Achievement.

Answers

- | | | |
|-----------------|--------------|-------------|
| 1) 7:15 a.m. | 2) 36.36% | 3) \$1,875 |
| 4) \$231.60 | 5) \$3442.50 | 6) 750 |
| 7) \$8,750 | 8) \$91.00 | 9) \$477.61 |
| 10) 2496 bricks | | |

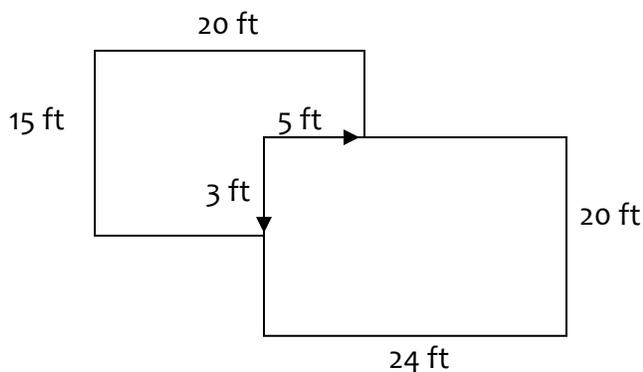
1. **Elapsed Time:** A summer session math class is scheduled for 2 hours and 50 minutes four days per week (including breaks). If the class must end at 10:05 a.m., what time should the class begin?

2. **Percent Increase or Decrease:** The government is considering an increase for the gasoline tax from 11 cents per gallon to 15 cents per gallon? What percent increase does this represent?

3. **Percentages/Equivalencies:** The property tax on a \$60,000 home is \$1,500. What would the equivalent tax be on a home valued at \$75,000?

4. **Installment Buying:** Laurel is buying a new car on the installment plan. The cash price is \$16,000, plus 6.5% sales tax. The installment terms are \$5,000 down plus a total finance charge of 29%. Laurel plans to set up payments of \$300 per month. How much will her final payment be?

5. **Area:** A brick deck in the shape of overlapping rectangles is to be made, as diagrammed below. If brick costs \$4.50 per square foot installed, find cost of deck.



6. **Fractions:** Three-fourths of the 5,000 employees represented by the Union Local 271 chose Kaiser Health Plan, and one-tenth chose Blue Cross. How many employees chose plans other than Kaiser and Blue Cross?

7. **Averages:** Sharon, Pedro, Ted, and Alisha earn salaries of \$24,000, \$33,000, \$22,000, and \$44,000 respectively at Rauff Chemical Corporation. How much below the average (mean) for this group is Ted's salary?

8. **Basic Operations:** (Adding, Subtracting, Multiplying, Dividing): Federal Express charges \$10 each for the first 2 pounds of package weight, \$7 for each pound or fraction of a pound between two pounds and ten pounds, and \$5 for each pound or fraction of a pound over 10 pounds. How much would it cost to send a 12 and one-half pound package by Federal Express?

9. **Compound Interest:** Last Interstate Bank pays 6% interest compounded quarterly on savings accounts. What will the balance be in a savings account if \$450 is deposited and left for one year with no additional deposits or withdrawals?

10. **Ratio and Proportion:** A brick wall 20 feet in length contains 1040 bricks. At the same rate, how many bricks would it take to build a wall 48 feet in length?

11. **Income Tax:** One problem will involve determining federal (form 1040 EZ) and California state income tax. You will be provided with information and tax tables at the time of the test.