Western Technical College

10804123  Math with Business Applications

Course Outcome Summary

Course Information

Description
This course covers...real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications.

Instructional Level
Associate Degree Courses

Total Credits 3
Total Hours 72

Textbooks

Learner Supplies

Course Competencies

1. Solve scenarios using basic math computations.

   Assessment Strategies
   1.1. Math Assessment with Consumer/Business Applications

   Criteria
   You will know you are successful when
   1.1. you use real numbers and basic operations to solve business/consumer problems.
   1.2. you answer with the precision of terms appropriate to the problem.
   1.3. you answer in the correct units of measure and labels.

2. Solve scenarios using algebraic concepts.

   Assessment Strategies
   2.1. Math Assessment with Consumer/Business Applications

   Criteria
   You will know you are successful when
   2.1. you identify the unknown with the appropriate variable.
   2.2. you write the equation that relates the known information with the appropriate variable.
2.3. you evaluate formulas for given value of the variables.
2.4. you use algebra to solve business/consumer scenarios.
2.5. you perform basic operations with signed numbers.
2.6. you employ the order of operations to simplify an expression.
2.7. you rearrange formulas to solve for a specific variable.
2.8. you solve linear equations.
2.9. you solve proportions.
2.10. you answer with the precision of terms appropriate to the problem.
2.11. you answer in the correct units of measure and labels.

3. **Solve percentage scenarios.**

Assessment Strategies
3.1. Math Assessment with Consumer/Business Applications

Criteria

You will know you are successful when
3.1. you convert between percents, decimals, fractions.
3.2. you identify the base, rate, and amount in the problem.
3.3. you compute the base, rate, or amount.
3.4. you use percentages to solve business/consumer scenarios.
3.5. you solve percent increase/decrease scenarios.
3.6. you answer with the precision of terms appropriate to the problem.
3.7. you answer in the correct units of measure and labels.

4. **Solve simple interest scenarios.**

Assessment Strategies
4.1. Math Assessment with Consumer/Business Applications

Criteria

You will know you are successful when
4.1. you identify the characteristics of simple interest.
4.2. you compute principal, rate, or time using simple interest formula.
4.3. you determine due date of a promissory note.
4.4. you compute maturity value, principal, rate, and time using maturity value formula.
4.5. you determine present and future values.
4.6. you use simple interest to solve business/consumer scenarios.
4.7. you answer with the precision of terms appropriate to the problem.
4.8. you answer in the correct units of measure and labels.

5. **Solve compound interest scenarios.**

Assessment Strategies
5.1. Math Assessment with Consumer/Business Applications

Criteria

You will know you are successful when
5.1. you identify the characteristics of compound interest.
5.2. you differentiate between simple and compound interest.
5.3. you determine the number of periods.
5.4. you determine the rate per period.
5.5. you compute compound interest and compound amount.
5.6. you determine present and future values.
5.7. you use compound interest formulas to solve business/consumer scenarios.
5.8. you determine the effective rate of interest.
5.9. you answer with the precision of terms appropriate to the problem.
5.10. you answer in the correct units of measure and labels.

6. **Solve annuity scenarios.**

Assessment Strategies
6.1. Math Assessment with Consumer/Business Applications

Criteria

You will know you are successful when

6.1. you identify the characteristics of an annuity.
6.2. you differentiate between the present and future value of an annuity.
6.3. you calculate the amount of a sinking fund payment.
6.4. you calculate the present and/or future values of an annuity.
6.5. you apply annuity calculations to business/consumer scenarios.
6.6. you answer with the precision of terms appropriate to the problem.
6.7. you answer in the correct units of measure and labels.

7. Apply math concepts to the purchasing/buying process.

Assessment Strategies

7.1. Math Assessment with Consumer/Business Applications

Criteria

You will know you are successful when

7.1. you calculate trade discounts.
7.2. you calculate net cost.
7.3. you differentiate between single and series discounts.
7.4. you express a series discount as a single discount equivalent.
7.5. you determine cash discount period.
7.6. you compute a cash discount.
7.7. you solve business/consumer scenarios involving the purchasing/buying process.
7.8. you answer in the correct units of measure and labels.
7.9. you answer with the precision of terms appropriate to the problem.

8. Apply math concepts to the selling process.

Assessment Strategies

8.1. Math Assessment with Consumer/Business Applications

Criteria

You will know you are successful when

8.1. you distinguish between markup based on cost and markup based on selling price.
8.2. you compute selling price, cost, or markup based on cost
8.3. you compute selling price, cost, or markup based on selling price.
8.4. you compute sale price, markdown, or original price.
8.5. you solve business/consumer scenarios involving the selling process.
8.6. you answer in the correct units of measure and labels.
8.7. you answer with the precision of terms appropriate to the problem.

9. Interpret basic statistics.

Assessment Strategies

9.1. Math Assessment with Consumer/Business Applications

Criteria

You will know you are successful when

9.1. you interpret charted data.
9.2. you construct charts/graphs.
9.3. you determine the appropriate chart given the raw data.
9.4. you calculate measures of central tendencies.
9.5. you interpret measures of dispersion.
9.6. you determine the probability of an event involving normally distributed data.
9.7. you use statistics to solve business/consumer scenarios.
9.8. you answer with the precision of terms appropriate to the problem.
9.9. you answer in the correct units of measure and labels.