

Athabasca University

COURSE LEARNING OUTCOMES  
MATH 100

Learners completing this course should be able to:

1. perform basic arithmetic operations on positive and negative whole numbers, fractions and decimals;
2. define and discuss the relationship between ratios, proportions and percentages and perform basic mathematical operations on them;
3. perform basic arithmetic operations on algebraic expressions and fractional algebraic expressions;
4. interpret and perform basic operations on algebraic expressions containing exponents;
5. solve systems of linear equations in up to three unknowns and explain how to solve systems in more than three unknowns;
6. set up a linear equation in one unknown from a descriptive problem, plot the graph of the equation and solve the equation;
7. determine consistency or inconsistency, dependence or independence of a system of linear equations from their graphs;
8. solve quadratic equations and equations having fractional algebraic expressions;
9. factor algebraic expressions;
10. describe the properties of arithmetic and geometric progressions and compute using them;
11. define and perform basic operations on logarithmic expressions;
12. define, set up, graph and solve inequalities;
13. define a set and use set notation for solutions of inequalities;
14. develop and solve absolute-value equations and absolute-value inequalities;
15. define angles using radian measure and convert between radian and degree measure;

16. define and use the elementary trigonometric functions sine, cosine and tangent;
17. solve problems using Pythagoras' Theorem;
18. calculate simple probabilities;
19. organize and present statistical data and calculate common measures of central tendency; and
20. explain the use of the Chi-squared test and calculate Chi-squared.