Math 109-004 Final Exam Information

The final will be in ALEKS. It will be available Tuesday, May 12, at 9:30am and must be finished by Friday, May 15, at 11:59pm. You will have two attempts, and only your highest score will count toward your grade. A optional practice final will be available in ALEKS from Monday, May 11, at 8am until Wednesday, May 13, at 11:59pm.

The final exam is comprehensive and will consist of 25 problems chosen randomly from 30 ALEKS topics. The 30 ALEKS topics are given below. Following each topic is the week in which the topic was covered, the corresponding textbook section, and the course objective (from the syllabus) aligned with the topic.

Final exam ALEKS topics

1. Domain of a rational function: Interval notation (Week 6, Section 2.3) [1]
2. Domain and range from the graph of a continuous function (Week 8, Section 2.3) [1]
3. Domain and range from the graph of a quadratic function (Week 10, Section 2.3) [1]
4. Finding the initial amount and rate of change given a graph of a linear function (Week 4, Section 2.4) [2]
5. Writing the equation of the line through two given points (Week 5, Section 2.5) [2]
6. Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients (Week 1, Section 1.1) [3]
7. Solving a compound linear inequality: Graph solution, basic (Week 1, Section 1.7) [3]
8. Predictions from the line of best fit (Week 7, Section 2.5) [4]
9. Finding where a function is increasing, decreasing, or constant given the graph: Interval notation (Week 7, Section 2.7) [5]
10. Determining if graphs have symmetry with respect to the x-axis, y-axis, or origin (Week 7, Section 2.7) [5]
11. Transforming the graph of a function using more than one transformation (Week 10, Section 2.6) [6]
12. Writing an equation for a function after a vertical and horizontal translation (Week 10, Section 2.6) [6]
13. Finding the roots of a quadratic equation with leading coefficient 1 (Week 2, Section 1.4) [7]
14. Applying the quadratic formula: Exact answers (Week 2, Section 1.4) [7]
15. Finding the vertex, intercepts, and axis of symmetry from the graph of a parabola (Week 11, Section 3.1) [8]
16. Finding the x-intercept(s) and the vertex of a parabola (Week 11, Section 3.1) [8]
17. Solving a radical equation that simplifies to a linear equation: One radical, basic (Week 3, Section 1.6) [9]
18. Solving an equation with a root index greater than 2: Problem type 1 (Week 3, Section 1.6) [9]
19. Solving a rational equation that simplifies to linear: Factorable quadratic denominator (Week 3, Section 1.4) [9]
20. Solving a polynomial inequality: Problem type 2 (Week 13, Section 3.6) [9]
21. Solving an exponential equation by using logarithms: Decimal answers, basic (Week 15, Section 4.5) [9]
22. Determining the end behavior of the graph of a polynomial function (Week 12, Section 3.2) [10]
23. Determining end behavior and intercepts to graph a polynomial function (Week 12, Section 3.2) [10]
24. Finding the asymptotes of a rational function: Linear over linear (Week 12, Section 3.5) [11]

25. Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator (Week 12, Section 3.5) [11]
26. Graphing an exponential function and its asymptote: $f(x) = b^x$ (Week 14, Section 4.2) [12]
27. Graphing a logarithmic function: Basic (Week 15, Section 4.3) [12]
28. Finding the final amount in a word problem on compound interest (Week 16, Section 4.2) [13]
29. Solving a system of linear equations using elimination with multiplication and addition (Week 16, Section 5.1) [14]
30. Solving a 3x3 system of linear equations: Problem type 1 (Week 16, Section 5.2) [14]