

Math 129-003 Final Exam Information

The final will be in ALEKS. It will be available Thursday, December 17, at 8am and must be finished by Friday, December 18, at 11:59pm. The final exam must be taken all at once, and you will have a time limit of 90 minutes. An optional practice final will be available in ALEKS from Tuesday, December 15, at 8am until Thursday, December 17, 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 8, Section 2.4) [1]
2. Domain of a square root function: Advanced (Week 8, Section 2.4) [1]
3. Writing the equation of the line through two given points (Week 7, Section 2.3) [2]
4. Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$ (Week 7, Section 2.3) [2]
5. Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form (Week 7, Section 2.3) [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: Interval notation (Week 2, Section 1.2) [3]
8. Translating a sentence into a multi-step equation (Week 1, Section 1.1) [3]
9. Sum, difference, and product of two functions (Week 12, Section 3.5) [5]
10. Composition of two functions: Basic (Week 12, Section 3.5) [5]
11. Expressing a function as a composition of two functions (Week 12, Section 3.5) [5]
12. Finding a difference quotient for a linear or quadratic function (Week 9, Section 2.5) [5]
13. Completing the square (Week 3, Section 1.5) [6]
14. Finding the roots of a quadratic equation with leading coefficient 1 (Week 3, Section 1.5) [7]
15. Applying the quadratic formula: Exact answers (Week 4, Section 1.5) [7]
16. Finding the vertex, intercepts, and axis of symmetry from the graph of a parabola (Week 13, Section 4.1) [8]
17. Graphing a parabola of the form $y = a(x - h)^2 + k$ (Week 13, Section 4.1) [8]
18. Finding the x -intercept(s) and the vertex of a parabola (Week 13, Section 4.1) [8]
19. Translating the graph of a parabola: Two steps (Week 11, Section 3.1) [9]
20. Transforming the graph of a function using more than one transformation (Week 11, Section 3.1) [9]
21. Finding where a function is increasing, decreasing, or constant given the graph: Interval notation (Week 9, Section 3.1) [10]
22. Finding local maxima and minima of a function given the graph (Week 9, Section 3.1) [10]
23. Solving an absolute value equation: Problem type 2 (Week 2, Section 1.3) [11]
24. Solving a proportion of the form $a/(x + b) = c/x$ (Week 4, Section 1.6) [11]
25. Solving a rational equation that simplifies to linear: Unlike binomial denominators (Week 4, Section 1.6) [11]
26. Solving a radical equation that simplifies to a linear equation: One radical, advanced (Week 5, Section 1.6) [11]
27. Solving a polynomial inequality: Problem type 2 (Week 15, Section 4.6) [11]
28. Finding zeros and their multiplicities given a polynomial function written in factored form (Week 14, Section 4.4) [12]
29. Synthetic division (Week 14, Section 4.2) [12]
30. Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator (Week 15, Section 4.5) [13]