

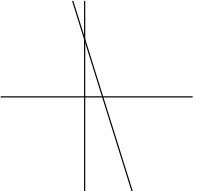
This 34 problem test is given as a tool to help you determine if you are properly prepared for Math 110 at BYU-Idaho. You should work these problems without a calculator. Be completely honest in taking this test. If you enroll in a class you are not prepared for, it will only slow your progress and hurt your grade.

You should get at least 21 correct on the actual test, (similar to these two practice forms), given to registered Math 110 students.

Should you score below a 21 on the actual test, you will need to talk with your instructor regarding your options, which may include refreshing your algebra skills by enrolling in a Math 101 course prior to attempting Math 110.

1. Simplify:  $8 - [2(-4 + 6) - 7(3 - 1)]$
2. Solve for  $x$ :  $\frac{3}{7}x = 7$
3. Simplify:  $-2(x - y) - x + 3y$
4. Simplify:  $\sqrt{32x^8y^4}$
5. Simplify:  $\frac{3}{4 + \frac{1}{3}}$
6. Simplify:  $(3x^2y^3)(-2x^4y)$
7. Find the  $y$ -intercept of the line  $\frac{x}{3} + \frac{y}{4} = 2$ .
8. Simplify:  $2^0 3^2 2^3$
9. Simplify:  $\frac{20x^3y + 12x^2y^2}{4x^2y}$
10. Rationalize the denominator:  $\frac{12}{\sqrt{3}}$
11. Graph the line:  $2x = 1 - y$
12. Solve for  $x$ :  $\frac{2}{x-1} - 4 = \frac{x}{x-1}$
13. Solve for  $x$ :  $Ax + By = C$
14. Simplify:  $\frac{(x+2)(x^2 - 2x - 3)}{(x-3)(x^2 + 3x + 2)}$
15. Simplify:  $\frac{a^2b + a}{ab + 1}$
16. Solve the inequality:  $7x + 4 < 10x - 4$
17. Solve for  $x$ :  $2x^2 + x - 1 = 0$
18. Simplify:  $\frac{3}{x} + \frac{2}{y} - \frac{1}{x}$
19. Simplify:  $\frac{x}{3y} + \frac{x}{2y}$
20. Simplify:  $(4)^{\frac{1}{2}} (8)^{\frac{2}{3}}$
21. If  $f(x) = 3x^2 + x$ , find  $f(3)$ .
22. If  $f(x) = 3x + x^2$ , find  $f(x - 1)$ .
23. Simplify:  $\frac{\frac{a}{b} + \frac{1}{c}}{\frac{1}{b} + \frac{a}{c}}$
24. Solve for  $x$ :  $6x^2 + x = 2$
25. Solve for  $x$ :  $0.02x - \frac{1}{100} = 0.3$
26. Factor:  $(2 - y)^2 x - (2 - y)$
27. The following equation relates Celsius degrees to Fahrenheit:  $F = \frac{9}{5}C + 32$ . If  $F = 14^\circ$  then  $C = ?$
28. Solve the inequality:  $(x - 1)(2x + 5) < 0$
29. If  $x = 9$  then  $x^{-2} = ?$
30. Solve the inequality:  $|3 - x| > 5$
31. Find the equation of the line that has a slope of  $-\frac{3}{4}$  and passes through the point  $(1, 2)$ .
32. Solve for  $x$ :  $x^2 + 12x = -3$
33. Find an equation of the line that passes through  $(-1, 5)$  and  $(2, -3)$ .
34. Find the distance between  $(-2, 4)$  and  $(5, -1)$ .

# Answer Key for Exam A

1. **Answer:** 18
2. **Answer:**  $\frac{49}{3}$
3. **Answer:**  $-3x + 5y$
4. **Answer:**  $4\sqrt{2}x^4y^2$
5. **Answer:**  $\frac{9}{13}$
6. **Answer:**  $-6x^6y^4$
7. **Answer:** 8
8. **Answer:** 72
9. **Answer:**  $5x + 3y$
10. **Answer:**  $4\sqrt{3}$
11. **Answer:** Slope is  $-2$ , y-intercept is 1.  

12. **Answer:**  $\frac{6}{5}$
13. **Answer:**  $\frac{C - By}{A}$
14. **Answer:** 1
15. **Answer:**  $a$
16. **Answer:**  $x > \frac{8}{3}$
17. **Answer:**  $x = -1$  or  $x = \frac{1}{2}$
18. **Answer:**  $\frac{2x + 2y}{xy}$
19. **Answer:**  $\frac{5x}{6y}$
20. **Answer:** 8
21. **Answer:** 30
22. **Answer:**  $x^2 + x - 2$
23. **Answer:**  $\frac{ac + b}{ab + c}$
24. **Answer:**  $x = \frac{1}{2}$  or  $x = -\frac{2}{3}$
25. **Answer:**  $\frac{31}{2}$
26. **Answer:**  $(2 - y)(2x - xy - 1)$
27. **Answer:**  $-10^\circ$
28. **Answer:**  $\frac{-5}{2} < x < 1$
29. **Answer:**  $\frac{1}{81}$
30. **Answer:**  $x < -2$  or  $x > 8$
31. **Answer:**  $3x + 4y - 11 = 0$
32. **Answer:**  $-6 \pm \sqrt{33}$
33. **Answer:**  $y = -\frac{8}{3}x + \frac{7}{3}$
34. **Answer:**  $\sqrt{74}$