

Name: \_\_\_\_\_

**College Algebra: Review (Test 1)**

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1. Find all solutions of the following equation.

$$|-2x + 14| + 7 = -4$$

2. Find an equation for the line passing through the points  $(6, -5)$  and  $(-2, -7)$ .

3. Convert the standard form linear equation

$$3y + x = -5$$

to slope-intercept form.

4. Find all solutions of the following equation.

$$\frac{x}{x-2} + 2 = \frac{2}{x-2}$$

5. Find all solutions of the following equation.

$$\frac{1}{5} + \frac{1}{x-3} = 1$$

6. Find all solutions of the following equation.

$$x^3 - 13x^2 + 36x = 0$$

7. Find all solutions of the following equation.

$$2x^4 - 13x^2 + 15 = 0$$

8. Find an equation for the circle centered at  $(4, -4)$  and having radius 1.

9. Find the midpoint of the points  $(2, 1)$  and  $(-6, 5)$ .

10. Find all solutions of the following equation.

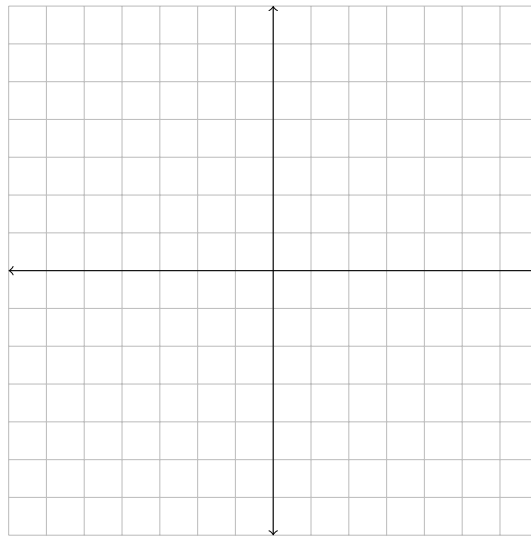
$$x^2 - x - 56 = 0$$

11. Find an equation for the line passing through the point  $(-7, -3)$  and having slope  $-1/5$ .

12. Find all solutions of the following equation.

$$\frac{x}{x+1} + 5 = \frac{7}{x+1}$$

13. Plot the graph of the linear equation  $y = \frac{3}{4}x - 3$  on the plane below.



14. Find the distance between the points  $(-5, -2)$  and  $(-4, -2)$ .

15. Find all solutions of the following equation.

$$|5x - 9| + 10 = 26$$

16. Find an equation in slope-intercept form for the line passing through the point  $(4, 3)$  and parallel to  $y = \frac{1}{2}x + 1$ .

17. Find all solutions of the following equation.

$$x^2 - 8x + 15 = 0$$

18. Find all solutions of the following equation.

$$-3 - |3x - 2| = |3x - 2| - 3$$

19. Find all solutions of the following equation.

$$|x^2 - 7x + 15| = 5$$