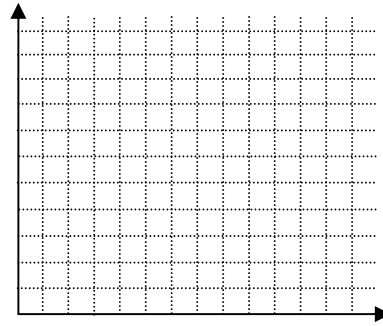


1. Make a table of values for the line  $f(x) = 2x - 1$ . Graph the line.

$x$	1	2	3	4	5
$f(x)$					



2. Solve the equation:  $\frac{x}{2} + \frac{x}{4} = 5$ .

2. \_\_\_\_\_

3. Solve the equation:  $\frac{8}{x+2} + \frac{8}{2} = 5$

3. \_\_\_\_\_

4. Solve the proportion:  $\frac{x+1}{3} = \frac{x+5}{x}$

4. \_\_\_\_\_

5. Solve:  $5x + 14 - 2x = 9 - (4x + 2)$ .

5. \_\_\_\_\_

6. Solve the inequality:  $-10 \leq -2x - 6 \leq 8$ .

6. \_\_\_\_\_

7. Given  $f(x) = 3x^2 + 2x - 7$ ; find  $f(3)$

7. \_\_\_\_\_

8. Given  $f(x) = -x^2 - 2x + 4$ ; find  $f(4)$

8. \_\_\_\_\_

9. One video rental club charges \$25 to become a member and \$2.50 to rent each video. Another store charges no membership fee, but charges \$3.25 to rent each video. How many videos must you rent to make the second club more expensive?

9. \_\_\_\_\_

10. Erik pays \$238 in advance on his account at the athletic club. Each time he uses the club, \$10 is deducted from the account. Find a linear function that models the value remaining in his account after  $x$  visits to the club. Find the value remaining in the account after 9 visits.

10. \_\_\_\_\_

11. Write an equation of the line in slope-intercept form that passes through the points  $(7, -1)$  and  $(2, 9)$ .

11. \_\_\_\_\_

12. Use linear combinations (elimination) to solve the linear system:

$$3x - 4y = 21$$

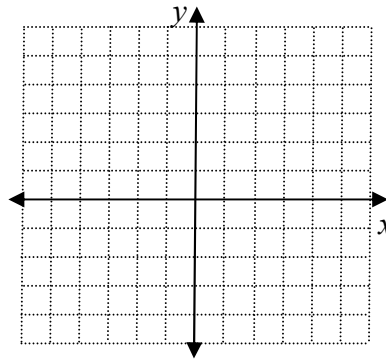
$$4x + 2y = 6$$

12. \_\_\_\_\_

13. A total of \$10,000 is invested in two funds paying 5% and 7% annual interest. The combined annual interest is \$644. How much of the \$10,000 is invested in each fund?

13. \_\_\_\_\_

14. Graph the parabola:  $y = -x^2 + 2x + 3$



15. Expand:  $(4x - 3)^2$

15. \_\_\_\_\_

16. Expand:  $(-x + 7)^2$

16. \_\_\_\_\_

17. Factor:  $x^2 - 9x + 14$

17. \_\_\_\_\_

18. Factor:  $2p^4 - 5p^2 - 12$

18. \_\_\_\_\_

19. Solve:  $x^2 + 2x - 2 = 0$

19. \_\_\_\_\_

20. Solve:  $4x^2 + 7x - 2 = 0$

20. \_\_\_\_\_

21. Simplify:  $\frac{(x-2)^2}{x^2 - 4}$

21. \_\_\_\_\_

22. Simplify:  $\sqrt{60} \cdot \sqrt{30}$

22. \_\_\_\_\_

23. Simplify:  $\sqrt{75} + \sqrt{108}$

23. \_\_\_\_\_

24. Distribute and simplify:  $\sqrt{6}(\sqrt{2} + \sqrt{3})$

24. \_\_\_\_\_

25. Simplify:  $\sqrt{\frac{27}{8}}$

25. \_\_\_\_\_

26. Solve the equation:  $\sqrt{2x+7} = 5$

26. \_\_\_\_\_

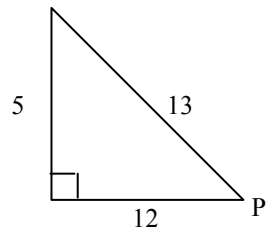
27. Simplify:  $\frac{x^8}{x^3}$

27. \_\_\_\_\_

28. Simplify  $(-7y)^2$

28. \_\_\_\_\_

29. Find  $\tan P$ .



29. \_\_\_\_\_

30. Solve the right triangle given that  $A = 50^\circ$ ,  $C = 90^\circ$ , and  $a = 13$  meters.

30. \_\_\_\_\_