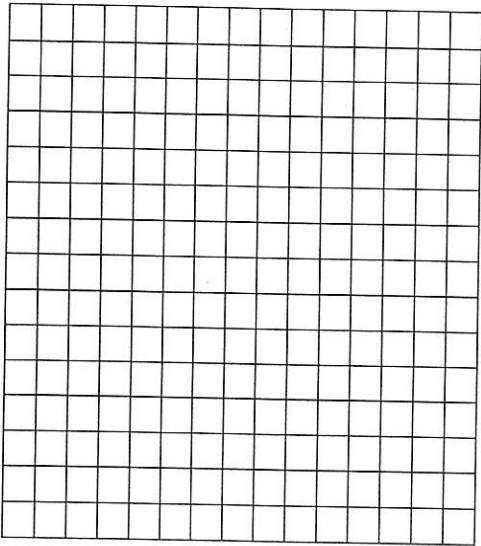


Show all necessary steps clearly, neatly, and systematically to receive full credit.

1. Solve by graphing method:
$$\begin{cases} 2x + y = 3 \\ x - \frac{1}{5}y = \frac{4}{5} \end{cases}$$



2. Solve and write the solution set in interval notation: $-3|6 - 2t| + 1 > -5$

3. A bank loaned out \$12000, part of it at the rate of 8% per year and the rest at the rate of 18% per year. if the annual interest received totaled \$1000, how much was loaned at 8%?

4. Solve by substitution method:
$$\begin{cases} 4x - 5y = 14 \\ 3y = x - 7 \end{cases}$$

5. Solve and write the solution set in set-builder notation: $7|2y + 1| - 3 \geq 18$

6. How many pounds of cashews cost \$9.00/lb. to mix with 60 pounds of almonds cost \$3.50/lb to make the mixture which cost \$7.50/lb?

7. Solve by elimination method:
$$\begin{cases} \frac{1}{4}x = \frac{11}{4} - \frac{1}{2}y \\ \frac{1}{3}y = \frac{7}{3} - \frac{2}{3}x \end{cases}$$

8. Let $f(x) = \frac{2}{3}x + \frac{3}{4}$.

a. Find $f(-3)$.

b. Find $f(a+2)$

c. Find the value(s) of x such that $f(x) = 1$.

d. Find the zero(s) of f .

9. A chemist wants to make 50 ml of a 6% acid solution by mixing a 13% acid solution and an 18% acid solution. How many milliliters of each solution should the chemist use?

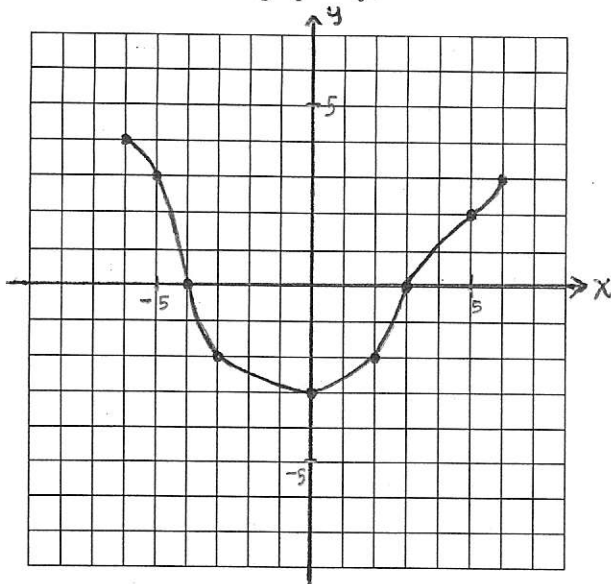
10. Find the domain of the given functions.

a. $f(x) = 5x^2 + 2$

b. $g(x) = \sqrt{\frac{3}{4}x - 4}$

c. $h(x) = \frac{\frac{2}{3}x + \frac{3}{9}}{4x - 5}$

11. Consider the graph of f .



- Find $f(2)$.
- Find $f(5)$.
- What is the domain of f ?
- What is the range of f ?
- What are the intercepts?
 x -intercept(s) y -intercept(s)
- For what number(s) x is $f(x) = -2$?
- What are the zeros of f ?

12. The cost, C , of renting a 12-foot moving truck for a day is \$40 plus \$0.35 per miles driven.

- Express the cost C as a function of driving the truck x miles.
- What is the implied domain of this linear function?
- What is the rental cost if the truck is driven 80 miles?
- How many miles can you drive if you can **spend up to** \$127.50?

13. Solve by elimination method:
$$\begin{cases} y = 2x + z + 1 \\ -3z - 1 = -2y + 2z \\ 5x + 3z = 16 - 3y \end{cases}$$