

Solve each system of equations:

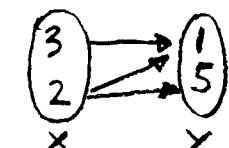
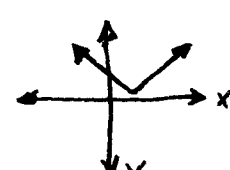
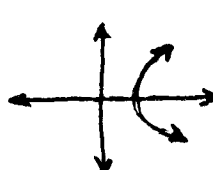
- ① $\begin{cases} y = 7 - x \\ 2x - y = 8 \end{cases}$ ② $\begin{cases} 3x + y = 6 \\ y + 2 = x \end{cases}$ ③ $\begin{cases} x + 6y = 1 \\ 3x - 10y = 31 \end{cases}$
- ④ $\begin{cases} \frac{1}{5}x - y = \frac{12}{5} \\ 3x - 5y = 6 \end{cases}$ ⑤ $\begin{cases} 4x - y = 4 \\ x + 2y = 3 \end{cases}$ ⑥ $\begin{cases} -6x + 16y = -8 \\ 6x - 42 = 16y \end{cases}$

⑦ Describe what the solution of a system of two linear equations means. How do you prove your solution is correct?

Solve:

- ⑧ $5x + 7 \leq 3(x + 1)$ ⑨ $-4x - 5 > 2x + 13$
- ⑩ $-5(x + 4) \geq 3(x - 4)$ ⑪ $3(x + \frac{2}{3}) \geq x - 1$

⑫ Explain why each relation is or is not a function:

- Ⓐ $\{(1, 3), (2, 6), (4, 3), (-1, -1)\}$ Ⓑ $\{(-1, 3), (-2, 3), (4, 3), (9, 3)\}$
- Ⓒ $\{(2, 5), (4, 6), (-1, 3), (5, 6), (4, -6)\}$ Ⓓ 
- Ⓔ  Ⓕ  Ⓖ $y = 3x - 2$

⑬ State the range of each function:

- Ⓐ $f(x) = -2x^2 + 5$
 $x = \{-2, -1, 0, 3\}$ Ⓑ 

- ⑭ What is the surface area of a cube 7 inches wide?
- ⑮ What is the circumference of a circle of diameter = 9 ft.

For each pair of points, find distance, midpoint, slope.

- ⑯ $(5, -2), (-3, 6)$ ⑰ $(8, 9), (-2, -1)$