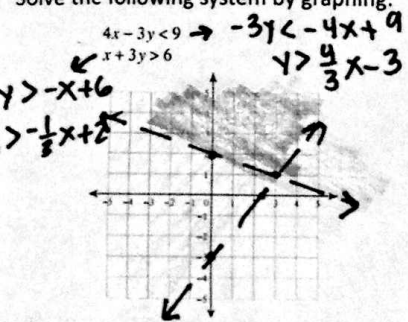


Test 1A Extra Practice

Answer Key

Solve the following system by graphing:



② Write the recursive formula for the following sequence:

5, 15, 20, 25, ...

$$a_1 = 5$$

$$a_n = a_{n-1} + 5$$

④ Write an explicit formula for the sequence: 20, 13, 6, -1 ...

$$a_1 = 20$$

$$d = -7$$

$$a_n = 20 - 7(n-1)$$

$$a_n = 27 - 7n$$

⑥ The senior classes at High School A and High School B planned separate trips to the water park. The senior class at High School A rented and filled 14 vans and 16 buses with 1086 students. High School B rented and filled 10 vans and 13 buses with 870 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.

$$14v + 16b = 1086$$

$$10v + 13b = 870$$

$$\text{vans} = 9 \text{ students}$$

$$\text{bus} = 60 \text{ students}$$

⑦ Given the following system, find $x + y$:

$$\begin{cases} x - y = 3 \\ 7x - y = -3 \end{cases}$$

$$x = -1$$

$$y = -4$$

so:

$$-1 + -4 = \boxed{-5}$$

⑨ Write an equation in slope intercept form of the line that is perpendicular to the graph of the equation $4x + 7y = 3$ and passes through the point $(-4, -7)$

$$4x + 7y = 3$$

$$y = -\frac{4}{7}x + \frac{3}{7}$$

$$\rightarrow y = \frac{7}{4}x + b$$

$$-7 = \frac{7}{4}(-4) + b$$

$$-7 = -7 + b$$

$$0 = b$$

$$y = \frac{7}{4}x$$

⑪ Given the explicit formula, find the term a_{25}

$$a_n = 60 - 24n$$

$$a_{25} = 60 - 24(25)$$

$$a_{25} = \boxed{-540}$$

The 25th term

⑧ The school that Imani goes to is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 3 senior citizen tickets and 3 child tickets for a total of \$69. The school took in \$91 on the second day by selling 5 senior citizen tickets and 3 child tickets. What is the price each of one senior citizen ticket and one child ticket?

$$3s + 3c = 69$$

$$5s + 3c = 91$$

$$s = \$11$$

$$c = \$12$$

⑩ Find the finite sum of the arithmetic series:

$$a_1 = 55, d = 12, n = 10$$

$$S = \frac{10}{2} (55 + 163)$$

$$a_{10} = 55 + 12(10-1)$$

$$a_{10} = 163$$

$$S = \boxed{1090}$$

⑫ Tell whether the lines for each pair of equations are parallel, perpendicular, or neither

$$y = 2x - 5$$

$$y = 5x - 5$$

$$y = (3/5)x - 3$$

$$5y = 3x - 10$$

neither

parallel

Tell whether the system has no solution, one solution, or infinitely many solutions

$$\begin{cases} y = 5x - 10 \\ -10x + y = -10 \end{cases}$$

$$\rightarrow y = 10x - 10$$

one solution

$(0, -10)$

If x is the number of years after 1950, find the slope of the linear function.

.1003

Rise in Minimum Wage

| Year | Minimum Wage |
|------|--------------|
| 1950 | \$ 75 |
| 1963 | \$1.25 |
| 1975 | \$2.40 |
| 1980 | \$3.10 |
| 1991 | \$4.25 |
| 1996 | \$4.75 |
| 1997 | \$5.15 |

Source: World Almanac 2001, p. 150.